THE ROLE OF SELF-COMPASSION IN WOMEN ATHLETES' BODY APPRECIATION AND INTUITIVE EATING: A MIXED METHODS APPROACH

A Thesis Submitted to the College of

Graduate Studies and Research in

Partial Fulfillment of the Requirements

for the Degree of Master of Science

in the College of Kinesiology

University of Saskatchewan

Saskatoon

By

Margo Eileen Killham

PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a Postgraduate degree from the University of Saskatchewan, I agree that the Libraries of this University may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by the professors who supervised my thesis work or, in their absence, by the Head of the Department or the Dean of the College in which my thesis work was done. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and the University of Saskatchewan in any scholarly use which may be made of any material in my thesis.

Requests for permission to copy or to make other use of material in this thesis in whole or part should be addressed to:

Dean of the College of Kinesiology

University of Saskatchewan Saskatoon,

Saskatchewan S7N 5B2

ABSTRACT

Despite the many benefits associated with women's participation in sport, women athletes are often exposed to potential challenges that can negatively affect their athletic experience. The root of many challenges in sport comes from the level of performance expectations and the frequency of evaluations that women face. Self-compassion is a construct informed by positive psychology that can help people manage self-judgment, rumination, and feelings of isolation while promoting a kind and understanding perspective of the self. Further, self-compassion promotes positive self-attitude without the drawbacks associated with self-esteem; however, past research on the role of self-compassion in women athletes' well-being is limited.

This research applies a mixed methods approach to address the role of self-compassion in women athletes' body appreciation and intuitive eating. The first phase was quantitative and expands on past research by examining how self-compassion relates to, and explains unique variance beyond self-esteem, in women athletes' body appreciation, intuitive eating, disordered eating, compulsive exercise, and state self-criticism. Participants were 90 women athletes aged between 18 and 27 years, who participated in a variety of sports and competitive levels and completed an online survey. Self-compassion was positively related to women athletes' body appreciation (r=.68, p< .01) and intuitive eating (r=.53, p< .01), while being negatively related to disordered eating (r=-.59, p< .01), compulsive exercise (r=-.37, p< .01), and state self-criticism (r=-.45, p< .01). Hierarchical regression analysis revealed that self-compassion contributed significant unique variance beyond self-esteem, after controlling for age and BMI (calculated from self-reported weight and height), in women athletes' body appreciation (4.1%, p<.01), intuitive eating (8.7%, p<.01), disordered eating (9.4%, p<.001), compulsive exercise (8.3%, p<.01), and state self-criticism (7.5%, p<.01). This study supports past research suggesting that self-compassion may be a useful tool for women athletes to manage challenging or difficult experiences in sport, while adding to the literature by highlighting that self-compassion might also play a role in positive sport experiences related to body appreciation and intuitive eating.

Six women athletes completed the qualitative phase. Interviews were conducted to explore how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating. Three main themes arose from the collective case study. Self-compassion

plays a role in body appreciation and intuitive eating by helping women athletes to recognize the uniqueness of sport contexts, through the promotion of awareness, and by helping them to set personalized expectations and standards. Together the quantitative and qualitative phases forward the study of women athletes' self-compassion, body image, and eating behaviour with a particular focus on positive constructs. As such, the current study provides a foundation to explore other positive psychological constructs and constructs informed by positive psychology and to examine the impact of a self-compassion intervention on women athletes' body appreciation and intuitive eating.

ACKNOWLEDGMENTS

I would like to take the time to acknowledge those who have invested their time and energy into my M.Sc. thesis and program. First and foremost, I would like to acknowledge my supervisor Dr. Kent Kowalski, thank-you for including me in your study of the human experience. You have taught and challenged me to think, speak, and write with clarity and intention. I have learned so much about what it means to be a researcher from you, thank-you for providing me with opportunities everyday to improve and be myself. Working with you has been a fantastic adventure; I am excited for the next four years of superhero, science fiction, and cylon references.

I want to recognize Dr. Nancy Gyurcsik and Dr. Rachel Duckham for being such wonderful committee members. I really appreciate all the time and energy you have put into my program. I can't imagine a better committee, thank-you for literally being there for me at all hours of the day and night, near and far.

I would also like to recognize Dr. Louise Humbert and Dr. Gerry Farthing for taking the time to act as the chair and as external examiner during my defence, thank-you both for your positivity and support.

Further, I would like to thank Dr. Larry Brawley, Dr. Jon Farthing, Dr. Saija Kontulainen, Dr. Kevin Spink, Ben Motidyang, and the great instructors at the Gwenna Moss Centre for their contributions to my education. I enjoyed being in your classrooms and thank-you all for helping me to grow as a graduate student.

I would also like to acknowledge the members from the Sport Health and Exercise Psychology Lab. It has been fantastic to have the chance to work with and get to know all of you. Thank-you all for helping me feel at home and being there with me at every step.

Last but not least, I would like to formally thank my friends and family. You all have been there in your own ways to encourage and support me through my program. I am thankful to be surrounded by such a loyal compassionate group of people.

DEDICATION

To Eileen Barry, Wendy and Bob Sr. Martin, Brenda and Bob Jr. Martin, and Madison Adam, my greatest accomplishment in life is to love and be loved by you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

CHAPTER 1

1.1 INTRODUCTION

Women athletes can experience a long list of psychological, physiological, and social benefits through sport participation (Crocker, 2011; Lox, Martin Ginis, & Petruzzello, 2006; Weinberg & Gould, 2011); including psychological benefits such as the satisfaction of the psychological needs for autonomy and competence (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011) and positive physiological adaptations to the cardiovascular system, musculoskeletal health, and body composition (Forcier et al., 2006; McArdle, Katch, & Katch, 2010; Weinberg & Gould, 2011). Further, women who participate in sport have the opportunity to develop interpersonal and leadership skills, and experience social support through a network of sports minded women (Lox, Martin Ginis, & Petruzzello, 2006).

However, despite the many benefits associated with women's participation in sport, women athletes are often exposed to potential challenges that can negatively affect their athletic experience (Lox et al., 2006; Weinberg & Gould, 2011). The root of many challenges in sport comes from the level of performance expectations and the frequency of evaluations that women athletes face (Bartholomew et al., 2011; Lox et al. 2006; Weinberg & Gould, 2011). These types of evaluations and performance expectations that women athletes experience can have a substantial impact on their psychological well-being, physical health, and interpersonal relationships (Weinberg & Gould, 2011).

Many of the psychological challenges women face in sport related to evaluation and expectations may be influenced by self-criticism. Constant and harsh self-scrutiny and evaluation of the self are the cornerstones of self-criticism (Dunkley & Grilo, 2007). Self-criticism is considered to be a destructive way to relate to the self (Powers, Zuroff, & Topciu, 2004). Further, research in the area of self-criticism has shown empirical relationships with depressive symptoms, over evaluation of weight and body size, self-silencing, self-oriented perfectionism, socially prescribed perfectionism, concern over mistakes, doubting of actions, and the perfectionism sub-scale of the dysfunctional attitudes scale (Dunkley & Grilo, 2007; Powers et al., 2004).

Three specific psychological challenges associated with sport participation involve self-

attitudes, self-expectations, and body image. Self-attitudes represent the way a woman relates and feels toward herself (Cash & Smolak, 2011). Women in sport are at risk for developing distorted self-attitudes due to the evaluative and outcome orientation of sport environments (Bartholomew et al., 2011; Lox et al. 2006; Weinberg & Gould, 2011). The second psychological challenge is the expectations athletes set for themselves in sport. When athletes hold expectations for themselves that are unrealistic (perfectionism), consuming (obsession), and cyclical (rumination), they can become dissatisfied with their experiences (Antony & Swinson, 2009; Bartholomew et al., 2011; Davis, 2008; Nepon, Flett, Hewitt, & Molnar, 2011). The third challenge is related to body image. Women in sport are observed by themselves, their coaches, their peers, and by spectators (Lox et al. 2006; Weinberg & Gould, 2011). This observation by the self and others can lead athletes to develop highly critical opinions towards their physical bodies, in turn developing a sense of dissatisfaction. Women athletes are also provided images and ideals of beauty and aesthetics by the media that are not accurate representations of "normality". These ideal images of women in the media are based on the thin-ideal present in Western culture, further enforcing potential body dissatisfaction for women athletes (Cash & Smolak, 2011) and/or a conflict with their own muscularity (Mosewich, Vangool, Kowalski, & McHugh, 2009). The combination of beauty ideals and observation by others can lead women to feel the need to compare their physical bodies to unattainable standards, particularly in sport where thinness and leanness are emphasized (e.g., gymnastics and track and field; Fitzsimmons-Craft, Harney, Brownstone, Higgins, & Bardone-Cone, 2012; Nattiv et al., 2007). Research related to the psychological challenges that women face concludes that poor self-attitudes, unrealistic expectations, and body dissatisfaction are correlated with low self-esteem, low self-compassion, lowered life satisfaction, anxiety, depression, and disordered eating behaviours (Ferreire, Pinto-Gouveia, & Duarte, 2013; Hausenblas, 2006; Neff, 2011; Raes 2010).

The various psychological challenges found in sport contexts have the potential to manifest in athletes' behaviour (Weinberg & Gould, 2011) and are often related to attitudes and behaviours towards eating, food, and training (Sundgot-Borgen & Torstveit, 2010). Women athletes can become preoccupied, and self-critical, with regimented restrictive eating and compulsive exercise as they attempt to achieve performance goals and atheistic ideals (Cash & Smolak, 2011; Deimel, & Dunlap, 2012; Haase, Prapavessis, & Owens, 2013; Haase, Prapavessis, & Owens, 2002; Tietjen-Smith, 2008). Compulsive exercise (ridged exercise

behaviours) can be a way that women athletes attempt to control and change their physical appearance (Plateau et al., 2014). Eating psychopathologies in athletes are represented by not consuming enough food for daily requirements, due to either an increase in exercise or restricted eating, which results in low energy availability (De Souza et al., 2014; Nattiv et al., 2007). Eating psychopathology can have significant physical consequences for women athletes such as energy deficiency, resulting in potential cardiovascular distress (Bartholomew et al., 2011), and potential injury, which may lead to burnout and discontinuation of competitive sport (Tietjen-Smith, 2008).

In recent years, with the increase in the participation of women in sport there has been an increased awareness of the female athlete triad. The female athlete triad is a medical condition often diagnosed in active female athletes involving the interrelationship between menstrual dysfunction, low energy availability (with or without disordered eating), and low bone mineral density (De Souza et al., 2014; Nattiv et al., 2007). Female athletes diagnosed with the female athlete triad will often present with one or more of the three components. If undetected the female athlete triad can have significant effects on health and physical performance, especially when accompanied with a clinical eating disorder (De Souza et al., 2014). Although diagnosis rates of the female athlete triad are low (1.2% to 4.3% of women athletes), rates of specific aspects of the triad (low energy availability, menstrual dysfunction, and low bone density) are higher in women athlete populations than the general population of women (Nattiv et al., 2007).

1.2 STATEMENT OF THE PROBLEM

There is a significant amount of research that has explored the challenges of sport participation for women and self-attitudes, body image, and eating psychopathology (e.g., Fitzsimmons-Craft et al., 2012; Hasse, Prapavessis, & Owen, 2002; Raes, 2010). This research foundation provides evidence that women athletes are at risk for psychological, physiological, and social imbalances that may reduce the quality of their sport experience. Research that looks only to the challenges of sport for women, particularly in the areas of self-attitudes, body image, and eating psychopathology, might overlook the positive aspects of participation. If researchers want to promote positive participation for women in sport, researchers must seek to better understand positive participation experiences, such as those related to self-compassion, body appreciation, and intuitive eating for women athletes. Through an exploration of self-

compassion, body appreciation, and intuitive eating this research aims to fill a gap in the literature related to adaptive functioning and positive sport experiences. Further this research seeks to provide further insight into how women athletes form and hold positive self-attitudes, maintain a sense of appreciation for the physical form and for one's physical ability, and how women athletes' adopt adaptive relationships with food.

1.3 PURPOSE

The general purpose of my research is to explore the role of self-compassion in women athletes' body appreciation, and intuitive eating. To address this specific purpose, I applied a mixed methods research approach, with quantitative and qualitative phases. The specific purpose of the quantitative phase was to examine the relationships between self-compassion and women athletes' body appreciation and intuitive eating. The specific purpose of the qualitative phase was to explore how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating. Together these two phases aim to further understand positive experiences in sport related to self-attitudes (self-compassion), body image (body appreciation), and adaptive eating (intuitive eating).

CHAPTER 2

2.1 REVIEW OF THE LITERATURE

Research is clear in showing that there are challenges associated with body dissatisfaction and maladaptive eating for women athletes that are related to issues of self-criticism and perfectionism[1]. As stated above, the purpose of this research is to explore the role of self-compassion in women athletes' body appreciation, and intuitive eating. Therefore, this review of relevant literature will introduce these three key constructs, present philosophical assumptions associated with the domain of study, discuss both foundational and current research and theory, how the constructs are related, and how the specific constructs are relevant to women athletes. Furthermore, this literature review will begin to highlight gaps in the literature.

The studies presented in this literature review were published in English and identified through searches of the following computerized databases: the University of Saskatchewan Library, Web of Science, Pubmed, Science Direct, and Google Scholar. Furthermore, papers were found through examination of published reference lists and on recommendation of supervisors. Key words used in searches included: women athlete, self-compassion, body image, body appreciation, body esteem, intuitive eating, adaptive eating, disordered eating, over training, compulsive exercise, self-criticism, female athlete triad, and self-esteem. These key words included both UK and USA spellings.

2.1.1 Positive Psychology

Positive psychology is defined as "The scientific study of optimal human functioning; which aims to discover and promote strengths and virtues that enable individuals and communities to thrive" (Myers, 2008, p.448). In psychology there is an imbalance in research, as reflected by the number of studies investigating negative states outnumbering those focused on positive states seventeen to one in the mid 2000's (Myers, 2008). Although research tends to focus on negative aspects of participation for women, there is a strong push for future research to

[1] This research focuses on women athletes specifically because women tend to score lower on a measure of self-compassion and higher on measures of self-criticism than men (Neff, 2003a). In addition, currently research in the area of self-compassion has focused predominately on female athletes (e.g., Mosewich et al., 2013).

adopt a positive psychology perspective (Cash & Smolak, 2011; Hefferon & Boniwell, 2011; Myers, 2008).

Positive psychology is multidimensional, focuses on the past, present, and future, and is interested in well-being, happiness, flow, personal strengths, and wisdom (Hefferon & Boniwell, 2011). Therefore, self-compassion, body appreciation, and intuitive eating are informed by positive psychology because each construct seeks to enable individuals to rise to their potentials in different areas of life. Further, self-compassion, body appreciation, and intuitive eating encourage individuals to recognize their strengths and have been referred to as adaptive ways of relating to the self, feeling about the self, and nourishing the self (Avalos et al., 2005; Neff, 2003a; Neff, 2011; Tylka & Kroon Van Diest, 2013).

2.1.2 Self-Compassion

Originating in Buddhist psychology and Eastern philosophy, the construct of self-compassion provides a relatively unique lens for examining the self to Western psychology (Neff, 2011; Neff et al., 2007a; Neff et al., 2007b; Neff, 2003a; Neff, 2003b). Neff (2003a) describes self-compassion as "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness" (p.87). According to Neff (2003a), the primary components of self-compassion are self-kindness, common humanity, and mindfulness. Neff (2003a) discussed self-kindness as a state of "being kind and understanding toward oneself in instances of pain or failure rather than being harshly self-critical" (p.85). Further, self-kindness is experienced through a gentle understanding of the self. The second component of self-compassion is common humanity, which is based on people seeing their experiences as connecting rather than isolating (Neff, 2003a). When people see their personal struggle as part of the "larger human experience" they have been self-compassionate (Neff, 2003a, p.85). The third component of self-compassion, mindfulness, is described as "holding painful thoughts and feelings in balanced awareness rather than over-identifying with them" (Neff, 2003a, p.85). It is this mindful perspective that helps people to move forward with their lives while still being aware of what they have come through.

Self-compassion is distinct from other psychological constructs of self-attitude, such as self-esteem, by one key element: self-compassion is a self-attitude that does not rely on social comparison to establish feelings of self-worth and satisfaction (Neff, 2003b). When individuals

are self-compassionate they do not need to be better than someone else to feel good. Neff (2003a) explained that self-compassion "is *not* based on the performance evaluations of self and others, or on congruence with ideal standards" (p.92). Further, research continues to assert self-compassion as an adaptive and healthy way to relate to the self. Self-compassion research has explored correlations among a variety of variables while accounting for unique variance beyond self-esteem in the prediction of health-related outcomes (Leary et al., 2007; Magnus, Kowalski & McHugh, 2010; Mosewich et al., 2011; Neff, 2003b; Neff, 2011; Raes, 2010). Research shows that self-compassion is negatively correlated with variables such as depression, anxiety, rumination, worry, stress, self-evaluation, shame, ego-defensiveness, self-enhancement, self-criticism, fear of failure, thought suppression, perfectionism, performance goals, body dissatisfaction, the drive for thinness, and disordered eating behaviours (Ferreira et al., 2013; Neff, 2011; Raes, 2010). Research has also found positive correlations between self-compassion and life satisfaction, emotional intelligence, social connectedness, learning goals, wisdom, personal initiative, curiosity, happiness, optimism, positive affect (Neff, 2011; Raes, 2010). Hence, not only is self-compassion likely to protect against dysfunctional cognitions, but self-compassion might also promote many positive psychological states.

Researchers are beginning to study self-compassion as a tool for physically active women and athletes. Across studies of physical activity the general conclusion that can be made are that self-compassion is a valuable tool that helps women during challenging experiences, that self-compassion is negatively associated with social physique anxiety, and that self-compassion fosters an appreciation for one's physical body (Berry, Kowalski, Ferguson, & McHugh, 2010; Magnus, Kowalski, & McHugh, 2010). A key aspect of self-compassion is that it promotes lower levels of self-criticism. As discussed above, self-criticism can be a self-attitude leading to destructive thoughts, emotions, and behaviours (Dunkley & Grilo, 2007; Powers et al., 2004). This makes self-compassion particularly relevant to women athletes as they are in a context where evaluation and expectation are commonplace. Research related specifically to women athletes has found that self-compassion is negatively associated with feelings of shame, social physique anxiety, objectified body consciousness, fear of failure, fear of negative evaluation, self-criticism, state rumination, and concern over mistakes (Mosewich et al., 2011; Mosewich, Crocker, Kowalski, & DeLongis, 2013). Further, these two studies have suggested self-compassion as a potential tool for women athletes.

In the study by Mosewich et al. (2013) a self-compassion intervention was examined in a women athlete population. The women athletes in this study were identified as holding sub-clinical levels of self-criticism. The athletes were randomized into control and intervention groups. The intervention involved self-compassion training and reflective writing tasks, after which they had significantly lower levels of self-criticism, rumination, and concern over mistakes. This study illustrates how self-compassion may be useful for women athletes to manage self-criticism. It, however, did not consider other constructs relevant to self-criticism that women have in sport contexts such as body image and eating attitudes and behaviours. Overall though, the results of the study by Mosewich et al. (2013) support the statement that self-compassion may be a useful tool for women athletes to protect them from challenging sport experiences.

2.1.3 Body Appreciation

Body appreciation was conceptualized and developed to better reflect positive aspects of body image experiences (Avalos et al., 2005). Body appreciation is characterized by women's ability to "(a) hold favorable opinions of their bodies, (b) accept their bodies in spite of their weight, body shape, and imperfections, (c) respect their bodies by attending to their body's needs and engaging in healthy behaviors, and (d) protect their body image by rejecting unrealistic images of the thin-ideal prototype" (Avalos et al., 2005, p.287). When body appreciation is compared to other positive body image constructs (such as body pride, body acceptance, body esteem, and body competence[2]) body appreciation is outstanding for three main reasons: the holistic nature of body appreciation, research supporting the construct as both valuable and applicable to counseling settings, and the measurability of body appreciation (Avalos et al., 2005; Cash & Smolak, 2011; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Body appreciation is also similar to self-compassion in that it does not rely on comparisons to others; people look within the self to gain an appreciation towards the body (Avalos et al., 2005). Further, body appreciation is a perspective towards the self that is not self-critical, but self-

[2] Body Appreciation houses aspects of other positive body image constructs such as: feeling good about the body regardless of shape or size (body pride), protecting ones body image by rejecting "ideals" (body-esteem), and having positive opinions about the body and what it can do (body competence) (Avalos et al., 2005; Krcmar, Giles, & Helme, 2008; Wood-Barcalow, et al., 2010).

understanding and accepting (Avalos et al., 2005; Avalos & Tylka, 2006). Avalos, Tylka, and Wood-Barcalow (2005) provided rationale for using the body appreciation scale for research; they stated that the body appreciation scale "predicted unique variance for psychological well-being above and beyond existent measures of body image" (p.285).

Other research has sought to understand the components of body appreciation in greater depth. A previous study by Wood-Barcalow, Tylka, and Augustus-Horvath (2010) applied grounded theory to explore positive body image. They interviewed undergraduate women who were identified as having positive body image, as well as body image experts, to explore possible components of positive body image. The main aspects of positive body image identified in their research were: appreciation, unconditional acceptance from others, body acceptance and love, spirituality/religion, finding others who are accepting of themselves, taking care of the body via healthy behaviours, filtering information in a body-protective manner, inner positivity influencing outer demeanor, broadly conceptualizing beauty, holistic body image model, reciprocity, filtering, and fluidity. This study further supports the use of body appreciation in research because the four components of body appreciation emerged as significant themes of positive body image for women (Wood-Barcalow et al., 2010). It is because of these findings that Wood-Barcalow et al. (2010) suggested that the body appreciation construct is currently the best way to measure and conceptualize positive body image.

Further, studies show that women exercisers who score high on body appreciation measures typically have higher levels of well-being. Specifically, body appreciation is negatively correlated with social physique anxiety, which can be based on self-critical thoughts (Koyuncu, Tok, Canpolat, & Catikkas, 2010), and eating pathology (Stice & Shaw, 2002). Further, body appreciation is positively correlated with psychological well-being and appearance satisfaction (Avalos et al., 2005), and there is initial support that self-compassion may be related to women athletes' body appreciation (Ferguson, 2014).

2.1.4 Intuitive Eating

The literature related to eating psychopathology suggests that women are at higher risk when they are exposed to stressful situations, are self-critical, are dissatisfied with their body, and when they strive toward cultural ideals of thinness (e.g., Sassaroli & Ruggiero, 2005; Tietjen-Smith, 2008). However, unlike constructs of eating psychopathology, intuitive eating is

an adaptive attitude towards eating that results in healthy intake behaviours (Tylka, 2006; Tylka & Kroon Van Diest, 2013). Intuitive eating is described as eating attitudes and behaviours that are based on physiological hunger and satiation cues – rather than eating for emotional reasons (Tylka, 2006). There are four components that make up the construct of adaptive eating: (a) eating for physical reasons rather than emotional reasons, (b) unconditional permission to eat rather than having forbidden foods or extended periods of hunger, (c) reliance of hunger and satiation cues – eating when hungry and stopping when full, and (d) body-food choice congruence – eating what the body needs (Tylka, 2006; Tylka & Kroon Van Diest, 2013).

The construct of intuitive eating is in its relative infancy and the research related to intuitive eating is limited. Therefore, it is important to understand how intuitive eating was developed and how the concept is measured. Intuitive eating was originally developed to represent not just the absence of pathology but to also explore unique aspects of adaptive eating. Recently revisions have been made to the intuitive eating construct and the measure (Tylka & Kroon Van Diest, 2013). Two main changes have been presented that make the second version of the intuitive eating scale, by Tylka and Kroon Van Diest (2013), more representative of adaptive eating behaviour. First, the construct has now been validated in both women and men university/college populations. Second, is the addition of the body food choice congruence subscale. The addition of the body-food choice congruence subscale is important because the subscale provides insight into the decisions individuals make regarding their nutrition focused food choices.

As mentioned, intuitive eating research is limited; however, across three studies intuitive eating was negatively correlated to eating disorder symptomology, body dissatisfaction, poor interceptive awareness, pressure for thinness, and internalization of the thin ideal in general undergraduate populations (Avalos & Tylka, 2006; Tylka, 2006; Tylka & Kroon Van Diest, 2013). Further, the three studies also stated a positive correlation between intuitive eating and several indexes of well-being, self-esteem, life satisfaction, proactive coping, and optimism. In a general college population, women's intuitive eating was found to be correlated with emotional awareness and negatively correlated with self-silencing and disordered eating (Shouse & Nilsson, 2011). Although research in the area of intuitive eating has not yet ventured into the domain of sport contexts or athlete populations, the current research project has examined

intuitive eating in a women athlete population. This represents a step forward, as intuitive eating may be an important aspect of positive sport experiences for women.

2.2 MOVING FORWARD

The literature to date shows that self-compassion is positively related to body appreciation (Wasylkiw, MacKinnon, & MacLellan, 2012), and that body appreciation is positively related to intuitive eating (Augustus-Horvath & Tylka, 2011). Because of the connection between self-compassion and body appreciation and between body appreciation and intuitive eating, a positive relationship between self-compassion and intuitive eating could exist. These three positive constructs are about seeing and promoting the good in how we feel about ourselves, treat ourselves, and nourish ourselves.

The links between self-compassion and body appreciation and between self-compassion and intuitive eating are further supported by the shared focus on reducing self-critical thoughts and behaviours (Avalos et al., 2005; Neff, 2003a; Tylka, 2006; Tylka & Kroon Van Diest, 2013). Self-criticism can be a destructive agent that is associated with the pathological and dysfunctional aspects of poor body image and maladaptive eating (Avalos et al., 2005; Neff, 2011; Neff 2003a; Neff 2003b; Tylka & Kroon Van Diest, 2013). People who are self-compassionate have lower levels of self-criticism because they are kind to the self (Neff, 2011; Neff, Kirkpatrick, & Rude, 2007a; Neff, 2003a; Neff, 2003b). Common humanity specifically can be argued to promote two aspects of body appreciation: (1) acceptance of the body and (2) being able to protect body image through the rejection of unrealistic representations of the thin ideal. Common humanity might also aid in the promotion of body appreciation through helping women to develop social support networks that in turn would promote positive attitudes toward the self (Avalos et al., 2005; Wood-Barcalow et al., 2010). Self-compassion can also be linked to intuitive eating because it is a balanced approach to eating that does not promote eating for emotional reasons (such as body dissatisfaction) or intake restrictions (put in place to strive toward the thin-ideal) that are associated with self-criticism (Shouse & Nilsson, 2011; Tylka & Kroon Van Diest, 2013). It is also possible that mindfulness, another aspect of self-compassion, would be influential in promoting components of intuitive eating such as: (1) eating for physical reasons rather than emotional reasons, (2) reliance on physiological cues, and (3) body-food choice congruence (Tylka & Kroon Van Diest, 2013). Mindfulness promotes a balanced

awareness that when applied to eating attitudes and behaviours would promote the ability to recognize what, when, and how much the body needs to consume (Avalos & Tylka, 2006; Neff, 2003a; Tylka, 2006; Tylka & Kroon Van Diest, 2013).

Exploring the role of self-compassion in women athletes' body appreciation and intuitive eating will further develop the understanding of the role of self-compassion in positive life experiences related to body image and eating. Research related to self-compassion is typically interested in the use, development, and promotion of self-compassion. Therefore, based on research in the area of self-criticism (Mosewich et al., 2013) and the conceptual connections drawn above, there is the potential that self-compassion is a practical way to intervene and in turn develop or increase body appreciation and intuitive eating levels for women athletes, while managing how some women athletes attempt to attain the thin ideal: disordered eating and compulsive exercise.

Suggestions for future research support a positive psychology approach (e.g., Cash & Smolak, 2011). The dominance of pathology-focused research is clear in the area of women athletes (e.g., Duckham et al., 2012; Titjen-Smith, 2008). There is much to learn about the positive experiences of women in sport related to self-compassion that may have a positive impact on women's body image and eating psychopathology. The future study of adaptive and maladaptive constructs together is important, to verify and confirm positive relationships between adaptive constructs, positive relationships between maladaptive constructs, and inverse relationships between adaptive and maladaptive constructs. My research study used a two-phase sequential explanatory mixed methods design (Creswell & Plano Clark, 2011). The purpose of the quantitative phase was to examine the relationships between self-compassion and women athletes' body appreciation and intuitive eating. Moreover, the quantitative phase also examined the relationships between self-compassion and women athletes' disordered eating, compulsive exercise, and state self-criticism. Furthermore, the quantitative phase also identified potential participants for the qualitative phase of the research project. Adding to the overall research purpose, while the purpose of the qualitative phase was to explore how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating.

CHAPTER 3

3.1 RESEARCH DESIGN

The research question posed for this study seeks both descriptive and narrative information. When asking the research question, *"What role does self-compassion play in women athletes' body appreciation and intuitive eating?"* this research aims to understand how the constructs are empirically related, as well as how self-compassion contributes to women athletes' personal experiences of body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism. Recognizing these distinct aims, the research question inspires a unique approach to seeking relevant answers. A mixed methods approach was applied to address both aspects of the question. The rationale for a mixed methods research project is justified as the study seeks both breadth (quantitative) and depth (qualitative) of information, which is supported by a pragmatic worldview. Pragmatism, as discussed by Creswell (2009), is the selection of methods that best fit the research question. The main strength associated with mixed methodology is being able to gain breadth of understanding through quantitative inquiry while also gaining depth from the qualitative components of data collection and analysis.

The mixed method design for this research study is an explanatory sequential design. As discussed by Creswell and Plano Clark (2011) an explanatory sequential design has the ability to seek an answer to the main research question from a variety of approaches, which in turn strengthens the research conclusions. Although this research has an explanatory sequential design it also has exploratory aspects. Exploratory research is research that considers a construct or theory in a unique way, in a new population, or in combination with another construct or theory. In short exploratory research aims to understand something that currently is unstudied. Sequential research is broken into distinct phases or stages that occur one after the other, unlike congruent research where all phases happen at the same time. The sequence of phases in this research is a quantitative phase followed by a qualitative phase. Research in the area of self-compassion, body appreciation, and intuitive eating has relied heavily on quantitative research (e.g., Magnus et al., 2010), with only a hand full of qualitative studies (e.g., Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). To develop the scientific study of self-compassion and other positive constructs further, qualitative and mixed methods approaches have been encouraged

(e.g., Ferguson, Kowalski, Mack, & Sabiston, 2014); interdisciplinary investigation also needs to be a focus of research to begin to see experiences holistically (Cash & Smolak, 2011).

The justification for a mixed methods research design is built on three major arguments: addressing the unknown, promoting sampling methods that support the research goals, and directly addressing the overall research question. The first justification for this approach is that the proposed research is seeking to understand body appreciation and intuitive eating in relation to self-compassion, which currently is an under-researched area of study. Thus, this research is seeking to explore the unknown.

The second justification for a mixed methods research design is because the sequential design supports specific sampling methods that will make the second phase of research meaningful. Based on a set of inclusion criteria, women from the first phase were invited to participate in the second phase of the study. Further, participant input (qualitative) is also important and necessary to explore body appreciation and intuitive eating as they relate to self-compassion. This input by participants is what makes the design more than just a descriptive study.

The third justification for a mixed methods research design is that quantitative data or qualitative data alone would not be sufficient to address the research question. To explore what role self-compassion plays in women athletes' body appreciation and intuitive eating, we need to see both the empirical relationships and how the women make meaning of their body appreciation and intuitive eating sport experience related to self-compassion. Thus, using both quantitative and qualitative methods in this research will provide both depth and breadth of understanding, providing a more holistic understanding of women in sport.

3.2 QUANTITATIVE PHASE

3.2.1 Purpose and Research Question

The purpose of the quantitative phase was to examine the relationships between self-compassion and women athletes' body appreciation and intuitive eating. This phase of the research project had two specific goals. The first goal was to explore the relationships between self-compassion and women athletes' body appreciation, intuitive eating, disordered eating,

compulsive exercise, and self-criticism. The second goal of this phase was to act as a selection process for the qualitative phase.

3.2.2 Participants

The population of interest was women athletes currently competing at the local, provincial, regional, national, elite for age, and international level. The first reason to study women athletes is because athletes are exposed to unique experiences through their involvement in sport contexts.[3] Research states that there are differences related to both eating behaviour and body image for women who participate in aesthetic and non-aesthetic sport contexts (de Bruin, Oudejans, & Bakker, 2007) and that there is a difference between team and individual sport experiences related to competition and group dynamics (Evans, Eys, & Bruner, 2012). Furthermore, research has shown that there are differences between athletes and non-athletes related to physical self-concept (Marsh, 1998). These research studies suggest that it is important to consider the details of participation because the context of participation may lead to a different experience of self-compassion, body appreciation, and intuitive eating than a general undergraduate population. The second justification for focusing on women athletes is because women in general tend to score lower on self-compassion measures and higher on self-criticism scales than their male counterparts (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999; Neff, 2003a). Further, self-criticism may be related to eating disorders and eating psychopathologies among women athletes (Kowalski & Duckham, 2014). In addition, women athletes have an increased risk of self-criticism, which is related to many negative outcomes such as depression and perfectionism (Neff, 2011). The third rationale that supports researching women athletes is that rates of participation for women are rising in Canada (Morrow & Wamsley, 2010; Nichols, Sanborn, & Essery, 2007); therefore the research findings have the potential to promote positive participation experiences for women. Fourth, and finally, this research aims to address the positive aspects of participation for women athletes, as suggested by Cash and Smolak (2011), related to well defined "risk areas" such as body dissatisfaction and maladaptive eating.

[3] Philip Zimbardo (2007), describes in great depth the critical role that context plays in influencing individuals thoughts, emotions, and behaviours. Zimbardio developed what is known as the *Lucifer Effect* based on research conducted at Stanford University in 1971 commonly referred to as *The Stanford Prison Experiment*.

Women athletes were eligible to take part in this study based on a set of inclusion criteria. The inclusion criteria for participation was as follows: the women must be between 18-27 years of age[4], currently competing in women's sport at one of the following levels: local, provincial, regional, national, elite for age, and international. The athletes must have a minimum of 2 full years experience in their identified primary sport[5], the women needed to have competed in the last 12 months[6], and finally the women athletes could not be currently pregnant or lactating[7]. The women athletes were recruited at the University of Saskatchewan (Saskatoon, SK) to participate.

3.2.3 Measures

3.2.3.1 Demographic Survey

From the descriptive survey demographic information was collected from participants. Details such as: age, height, weight, sport, position or role in their sport, length of involvement, level of competition (highest and current), and components related to the female athlete triad, such as self-reported current and past menstrual history, deficient or low energy intake, and low bone density were collected (see Appendix A1 for full survey). This demographic survey contains similar items used in past M.Sc. Thesis research at the University of Saskatchewan (e.g., Besenski, 2009; Mosewich, 2008; Reis, 2013). Further, published research Mosewich et al. (2011) used a similar survey to collect demographic information. This information was also used to account for other potential factors that may impact the outcome variables of the research, such as sport type and competition level.

---

[4] This age range has been selected as the three primary measures and have been validated in undergraduate populations (Avalos, Tylka, & Wood-Barcalow, 2005; Neff, 2003b; Tylka & Kroon Van Deist, 2013).

[5] This time frame has been suggested as ideal for individuals to acclimatize to the social environment of sport and to be exposed to the potential challenges related to performance expectations and evaluations (Weinberg & Gould, 2011).

[6] This inclusion criterion has been selected to maintain consistency with other research in the area of self-compassion and woman athletes (e.g., Mosewich, et al., 2011).

[7] This inclusion criteria was used as the experience of pregnancy could change women athletes self-compassion, body appreciation, and eating thoughts and behaviours.

3.2.3.2 Self-Compassion Scale (SCS)

To measure self-compassion the Self-Compassion Scale (SCS), developed and validated by Neff (2003b), was used (see Appendix A2 for full questionnaire). This 26-item 5-point likert type scale has six sub-scales, which together represent the components of self-compassion: self-kindness (5 items; e.g., "I'm tolerant of my own flaws and inadequacies") – self-judgment (5 items; e.g., "when times are really difficult, I tend to be tough on myself"), mindfulness (4 items; e.g., "when something upsets me I try to keep my emotions in balance") – over-identification (4 items; e.g., "when something upsets me I get carried away with my feelings"), and common humanity (4 items; e.g., "I try to see my failings as part of the human condition") – isolation (4 items; e.g., "when I fail at something that's important to me I tend to feel alone in my failure") (Neff, 2003b, p.231-232). Responses range from 1 (almost never) to 5 (almost always). The mean self-compassion score is calculated by first reverse coding negative items (self-judgment, over-identification, and isolation), and then the scores are averaged (Neff et al., 2005). Higher self-compassion scores are descriptive of higher levels of self-compassion (Neff, 2003b). The reported SCS composite internal consistency ranges from $\alpha = .73$ to $\alpha = .94$ in university undergraduate samples (Leary et al., 2007; Neff, 2003b; Neff et al. 2005). In a sample of women athletes' the internal consistency has been reported as $\alpha = .87$ (Mosewich et al., 2011).

Content validity has been assessed for the SCS. Individuals with higher SCS scores express compassion toward the self and toward others, which supports the content validity of the measure (Neff, 2003b). The SCS is negatively correlated with self-criticism ($r = -.65$, $p < .01$), while being positively related to social connectedness ($r = .41$, $p < .01$; Neff, 2003b). In a women athlete population the SCS has demonstrated positive correlations with authentic pride ($r = .42$, $p < .01$), and self-esteem ($r = .60$, $p < .01$); the SCS has also shown negative correlations with social physique anxiety ($r = -.37$, $p < .01$), objectified body consciousness ($r = -.54$, $p < .01$), body surveillance ($r = -.42$, $p < .01$), body shame ($r = -.53$, $p < .01$), performance failure appraisal ($r = -.51$, $p < .01$), and fear of negative evaluation ($r = -.47$, $p < .01$; Mosewich et al., 2011). These correlational findings suggest that women athletes who score higher on the SCS experience higher levels of psychological well-being.

Discriminant validity for the SCS is supported through the negative correlations with narcissism ($r = -.08$, $p = .28$) and self-criticism ($r = -.65$, $p < .01$; Neff, 2003b). Further, discriminant validity for the SCS is supported because the social desirability scale does not

influence the SCS (r = .05, p = .34), and the SCS continues to account for unique variance beyond self-esteem on a number of outcome variables (Leary et al., 2007; Magnus et al., 2010; Mosewich et al., 2011; Neff, 2003a; Neff, 2003b; Neff, 2011; Neff & Vonk, 2009).

3.2.3.3 Self-Esteem (RSES)

The Rosenberg Self-Esteem Scale (RSES) was used to measure self-esteem (see Appendix A3 for full questionnaire). The RSES is a 10-item 4-point likert scale measure (e.g., "I feel that I'm a person of worth, at least on an equal plane with others"); with responses ranging from strongly agree (3) to strongly disagree (0) (Rosenberg, 1965). There are five positively worded items and five negatively worded items in the RSES. The scoring procedure for the RSES is to first reverse code the five negatively worded items and then add the scores together, which provides a RSES composite score for each participant.

Internal consistency for the RSES has been addressed in university populations. Conbrach's Alpha ranges from α = .72 to α = .88 (e.g., Choi, Meininger, & Roberts, 2006; Martin-Albo, Nunez, Navarro, & Grijalvo, 2007; Rosenberg, 1965). Mosewich et al., (2011) reported internal consistency α = .83 in an athlete population.

The RSES has been used in research that pertains to women athletes' and has found similar results to other populations (e.g., Mosewich et al., 2011). In a study conducted by Mosewich et al., (2011) results showed positive correlations between the RSES and authentic pride (r = .72, p < .01) and self-compassion (r = .60, p < .01). Further, the RSES has negative correlations with guilt (r = .32, p < .01), hubristic pride (r = -.24, p < .01), fear of negative evaluation (r = -.47, p < .01), performance failure appraisal (r = -.51, p < .01), body shame (r = -.53, p < .01), body surveillance (r = -.42, p < .01), objectified body consciousness (r = -.54, p < .01), and social physique anxiety (r = -.37, p < .01). These correlations suggest that women athletes who score higher on the RSES experience higher levels of psychological well-being.

3.2.3.4 Body Appreciation Scale (BAS)

Body image was assessed through the use of the Body Appreciation Scale (BAS) developed by Avalos, Tylka, and Wood-Barcalow (2005). This 13-item 5-point likert scale poses questions related to four specific components of positive body image: (a) that women hold favorable opinions of their bodies (e.g., "On the whole, I am satisfied with my body"), (b) accept

their bodies despite their weight/shape/imperfections (e.g., "Despite its imperfections, I still like my body"), (c) respect for their bodies (e.g., "I am attentive to my body's needs"), and (d) protect their body image against unrealistic expectations or ideals (e.g., "I do not allow unrealistically thin images of women presented in the media to affect my attitudes towards my body"; see Appendix A4 for full questionnaire). Responses range from 1 (never) to 5 (always). Negatively worded items are reverse coded and the all items are summed and averaged to score the BAS (Avalos et al., 2005).

Avalos et al. (2005) evaluated the internal consistency of the BAS. Cronbach's alpha was used to assess internal consistency and considered item total correlations. The $\alpha = .94$ and item total correlations, from study one and study two, ranged from .41 to .88 ($\mu = .73$). These values support the internal consistency of the BAS (Avalos et al., 2005).

Higher BAS scores were strongly associated with positive evaluations of one's appearance (Avalos et al., 2005). Correlations between the BAS and the subscales of the body-esteem scale are: sexual attractiveness ($r = .50$, $p < .001$), physical condition ($r = .60$, $p < .001$), and lower weight concern ($r = .72$, $p < .001$). These finding suggest that individuals who had positive body esteem were more likely to appreciate their bodies. Further, the BAS is negatively correlated with body surveillance ($r = -.55$, $p < .001$), body shame ($r = -.73$, $p < .001$), body preoccupation ($r = -.79$, $p < .001$), body dissatisfaction ($r = -. 73$, $p < .001$), eating disorder symptomology ($r = -.60$, $p < .001$), while being positively correlated with self-esteem ($r = .53$, $p < .001$), optimism ($r = .42$, $p < .001$), proactive coping ($r = .41$, $p < .001$), and evaluating one's appearance favorably ($r = .68$, $p < .001$). These correlations, both negative and positive, support the association between the BAS and psychological well-being (Avalos et al., 2005). Furthermore, the correlational findings related to the BAS suggest that positive body image is both the absence of pathology and the presence of adaptive cognitions.

The BAS accounts for variance beyond other measures of body image, which suggests additional construct and incremental validity for the BAS (Avalos et al., 2005). Avalos et al. (2005) conducted three hierarchical regressions. The first regression supports that the BAS predicted self-esteem, the second regression supports that the BAS predicted optimism, and the third regression supports that the BAS predicted proactive coping beyond the body-esteem scale (Avalos et al., 2005).

3.2.3.5 Intuitive Eating Scale-2 (IES-2)

The Intuitive Eating Scale-2 (IES-2) was used to measure intuitive eating (Tylka & Kroon Van Diest, 2013). The IES-2 is the second version of the intuitive eating scale. The difference between the first and second version of this measurement is the inclusion of the body-food choice congruence items (Tylka & Kroon Van Diest, 2013). The IES-2 is a 23-item 5-point likert scale that addresses the four major components of intuitive eating: unconditional permission to eat (UPE; 6 items; e.g., "If I'm craving a certain food, I allow myself to have it"), eating for physical reasons (EPR; 8 items; e.g., "I mostly eat foods that make my body perform efficiently (well)"), reliance on hunger and satiety cues (RHSC; 6 items; e.g., "I rely on my hunger signals to tell me when to eat"), and body-food choice congruence (B-FCC; 3 items) (e.g., "I mostly eat foods that give my body energy and stamina"; see Appendix A5 for full questionnaire; Tylka & Kroon Van Diest, 2013). Responses range from 1 (strongly disagree) to 5 (strongly agree). To score the IES-2 negative items are reverse coded and then added together for a composite score, which is then divided by the number of items to produce a mean score.

Internal consistency was assessed for the IES-2 and is stated as strong (Tylka & Kroon Van Diest, 2013). Cronbach's coefficient $\alpha = .87$ for women's composite IES-2 scores. The subscales coefficients for women are: UPE $\alpha = .81$, EPR $\alpha = .93$, RHSC $\alpha = .88$, and B-FCC $\alpha = .87$ (Tylka & Kroon Van Diest, 2013). The correlations between the original IES and the IES-2 are: composite scores ($r = .87$), UPE ($r = .95$), EPR ($r = .90$), and RHSC ($r = .86$) for women, which suggests that the original IES and the IES-2 are measuring the same construct.

Test-retest reliability has been determined through the use of intraclass correlations (Tylka & Kroon Van Diest, 2013). The test-retest relationships are: composite scores ($r = .88$), UPE ($r = .86$), EPR ($r = .81$), RHSC ($r = .80$), and B-FCC ($r = .77$) across a three-week period for women (Tylka & Kroon Van Diest, 2013).

Correlations with other measures of pathology and well-being provide evidence of construct validity (Tylka & Kroon Van Diest, 2013). The IES-2 is negatively correlated with: disordered eating ($r = -.59$, $p < .001$), body surveillance ($r = -.32$, $p < .001$), body shame ($r = -.60$, $p < .001$), internalization of ideals ($r = -.37$, $p < .001$), poor interoceptive awareness ($r = -.43$, $p < .001$), and negative affect ($r = -.35$, $p < .001$). Further, the IES-2 is positively correlated with: body appreciation ($r = .53$, $p < .001$), self-esteem ($r = .41$, $p < .001$), positive affect ($r = .30$, $p < .001$), and life satisfaction ($r = .33$, $p < .001$). Finally, the IES-2 predicts psychological

well-being after controlling for disordered eating symptomology (Tylka & Kroon Van Diest, 2013).

Currently there are no known results for the IES-2 in research with women athlete populations.

3.2.3.6 Eating Disorder Examination-Questionnaire (EDE-Q)

The Eating Disorder Examination Questionnaire (EDE-Q) was used as in indicator of the participants' eating psychopathology (see Appendix A6 for full questionnaire; Fairburn & Beglin, 1994). The EDE-Q is a 28-item, 7-point likert scale. The EDE-Q is a self-report survey version of the interview-based Eating Disorder Examination (EDE; Fairburn & Beglin, 1994), where each likert point is representative of how many days a specific behaviour occurred over the past 28 days. This style of measurement is suggested to be more accurate method of determining disordered eating behaviours than asking how many total episodes of a specific behaviour occurred (Rossiter, Agras, Telch, & Bruce, 1992).

The EDE-Q has four subscales that address the main behavioural aspects of disordered eating: restraint (5 items; e.g., "have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?"), shape concern (8 items; e.g., "has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?"), weight concern (5 items; e.g., "has your weight influenced how you think about (judge) yourself as a person?"), and eating concern (5 items; e.g., "have you had a definite fear of losing control over eating?"; Fairburn & Beglin, 1994).

Psychometric evaluation for the EDE-Q has shown that the measure is internally consistent, reliable, and valid (Berg, Peterson, Frazier, & Crow, 2012; Luce & Crowther, 1999). The internal consistency of the EDE-Q has been assessed by four different studies of adult women where alphas ranged from .70 to .93 (Bardone-Cone & Agras, 2007; Luce & Crowther, 1999; Mond, Hay, Rodgers, Owen, & Beumont, 2004; Peterson, et al., 2007). Further, a meta-analysis conducted states that all four studies show acceptable levels of internal consistency with alphas ranging from .70 to .93 for the EDE-Q subscales (Berg et al., 2012). The test-retest reliability, after two weeks, has been examined in both women in the general population (Luce & Crowther, 1999) and a mixed gender clinical population (Reas, Grilo, & Masheb, 2006) with

alphas ranging from .66 to .94. The test-retest correlations from these two studies range from .66 to .94 for the four subscales (Berg et al., 2012).

Construct validity for the EDE-Q is described in a meta- analysis by Berg et al. (2012). This meta-analysis stated that women who have been diagnosed with an eating disorder scored significantly higher on the EDE-Q than the women in the control group. Another study included in the meta-analysis showed a significant difference on items related to shape and weight concerns between obese women who binge eat and obese women who do not binge eat. Finally, the restraint subscale is strongly correlated with other measures of dietary restraint (*r*'s = .76 to .79; Bardone-Cone & Agras, 2007).

3.2.3.7 The Compulsive Exercise Test – Athlete Version (CET-AV)

Women athletes' compulsive exercise was measured with the Compulsive Exercise Test – Athlete Version (CET-AV; see Appendix A7 for full questionnaire). The CET-AV is a revised version of the Compulsive Exercise Test (CET; Taranis, Touyz, & Meyer, 2011) that has been adapted to be relevant to athletes (Plateau et al., 2014). The CET-AV is a 15-item 6-point likert scale measure with three subscales: avoidance of negative affect (ANA, 6 items; e.g., " if I cannot exercise I feel low or depressed"), mood improvement (MI, 5 items; e.g., "exercise improves my mood"), and weight control exercise (WCE, 4 items; e.g., "if I feel I have eaten too much, I will do more exercise"). Responses to the CET-AV items range from 0 (never true) to 5 (always true) and higher scores indicate greater compulsivity related to athletes' exercise behaviour. The CET-AV produces both subscale scores and a global score (Plateau et al., 2014). The subscale scores are calculated by summing the subscale items and then dividing the sum of the scale by the number of scale items. After the three subscale scores have been calculated the sum of the three domains are summed to produce the global CET-AV score.

The CET-AV has been psychometrically evaluated (Plateau et al., 2014). All the CET items underwent an analysis to determine the items and structure that would be best fit for the data and representative of athletes' compulsive exercise. Further, evaluation has shown that the CET-AV holds internal consistency and convergent validity for athletes. The alpha coefficients are: ANA α =.87, MI α =.71, WCE α =.82, and the global score α =.62.

To assess convergent validity for the CET-AV and the EDE-Q a series of one-tailed Spearman's rho correlations were analyzed (Plateau et al., 2014). Strong correlations were found

between the EDE-Q subscales and weight control exercise $r(685) \geq .53$, $p < 0.01$; avoidance of negative affect $r(685) \geq .31$, $p < 0.01$; and the global CET-AV score $r(685) \geq .47$, $p < 0.01$. Mood improvement held a small positive correlation with the EDE-Q $r(685) \geq .16$, $p < 0.01$.

3.2.3.8 State Self-Criticism – Athlete Version

A state self-criticism measure specific for athletes (SC-AV) assessed athletes' self-criticism (Mosewich et al., 2013). The SC-AV is a 7-item, 10-point likert scale measuring an athlete's self-criticism (see Appendix A8 for full questionnaire). This measure was adapted from the self-monitoring log measure developed by Gilbert and Procter (2006), which was originally designed to have individuals record their self-critical thoughts and emotions. Participants are asked to reflect on a salient negative event from the past week in their sport and then respond to the seven questions (e.g., "How intrusive were your self-critical thoughts about a recent negative sport event?"). Responses for all questions could range from 1 to 10 (e.g., 1 = "not at all" to 10 = "very intrusive"), with higher scores representing higher levels of self-criticism (Mosewich et al., 2013). The SC-AV score is calculated by first reverse coding item 7 and then calculating the mean value for the seven items. Higher mean values indicate that the athlete has a higher state self-criticism.

3.2.3.9 Self-Identification Task (SIT)

A self-identification task (SIT) was developed to help with the selection process of athletes for the qualitative phase of this research (see Appendix A9 for task). Individuals were provided a brief description of how to complete the task, including definitions and brief examples of self-compassion, body appreciation, and intuitive eating. This allowed the women athletes context to answer the following yes or no question: "Would you describe yourself as high in all three of the above (self-compassion, body appreciation, and intuitive eating)?" If the athlete answered yes, she was then asked to provide an e-mail address to indicate that she would be willing to be contacted to participate in qualitative research phase (i.e., phase two) with a focus on how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating.

3.2.4 Procedure

3.2.4.1 Recruitment & Consent

Recruitment began after receiving ethical approval from the University of Saskatchewan (see Appendix B). Participants were recruited using four main methods: classroom recruitment (see Appendix C1), posters (see Appendix C2), PAWS announcements (the University of Saskatchewan online message board for students; see Appendix C3), and through university athletic department (see Appendix C4), each according to University protocols. Classroom recruitment involved introducing the research study to all students in undergraduate and graduate courses (in the College of Kinesiology and the Faculty of Arts and Science), describing the inclusion criteria and what is required for participation, and emphasizing that confidentiality would be upheld at all stages of the research process. Students who were interested were instructed to write their e-mail address on a slip of paper provided to them; however, all blank and filled out slips were collected to protect the confidentiality of students. Posters with information regarding the research study were posted across the University of Saskatchewan. PAWS announcements were also posted with descriptive information about the study; when looking at the on-line bulletin students could e-mail for more information or follow a link to the study survey. Finally, working in accordance with the athletic department regulations, coaches were provided information regarding the study and could elect to pass the information on to their athletes. After any potential participants' questions and concerns had been addressed, each potential participant, regardless of method of recruitment, was e-mailed the link to the survey.

Consent was obtained on-line before the athlete could complete the questionnaire component of the study. As part of the consent process, each participant was informed of the following: her rights to withdraw, who to contact with questions and concerns, how confidentiality would be upheld, storage duration of the data, and the right to request study results upon completion (see Appendix C5 for full informed consent form).

3.2.4.2 Data Collection

On-line data collection started immediately following the participants' consent to participate. The questionnaires were presented to participants in the following order: the demographic survey, SCS, RSES, BAS, IES-2, EDEQ, CET-AV, SC-AV, and the SIT. Finally,

the athlete completed the self-identification task. To manage potential fatigue effects the online survey included the option to save and continue later at the bottom of each page. When the athlete finished completing the full questionnaire a thank you message appeared thanking them for their participation.

3.2.5 Data Analysis

Before data analysis started the data went through a data cleaning process and statistical assumption testing. The data cleaning process ensures that information is labeled and coded properly, manages missing data points (mean replacement by subscale for missing items), and checks for outliers, kurtosis, and skewness. Data cleaning procedures are based on suggestions made by Tabachnick and Fidell (2007). After the data was cleaned it was tested for normality, independence, and linearity (Field, 2009).

The quantitative data was analyzed for correlational information using the Statistical Package for Social Sciences (SPSS version 21). The Pearson's Correlation Coefficient (PCC) was used to test the significance of relationships among self-compassion, body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism. The PCC is a standardized measurement of the strength of a relationship between variables, ranging from perfect negative correlation at -1.00 and perfect positive correlation at +1.00 (Field, 2009). Hierarchical regression analysis was also used to determine if self-compassion added significant unique variance beyond self-esteem on the constructs of body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism for women athletes. Each regression analysis had three steps. In the first step age and BMI were entered (as control variables), then in the second step self-esteem was entered, and in step three self-compassion was entered into the regression. Age and BMI were entered in step one as control variables because of the potential impact on outcome variables. Athletes' age is important to control for as body image and eating psychopathologies fluctuate over time (Lox et al., 2006). BMI was controlled for because higher BMI values have been associated with higher self-criticism, body dissatisfaction, and eating psychopathologies (Cash & Smolak, 2011; Lox et al., 2006). The regression analysis was set up this way to better understand the unique variance that self-compassion contributes to women athletes' body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism. Further, the descriptive data related to sport type and level of competition was used to

group the participants and compare variable means between team and individual sports, aesthetic and non-aesthetic sports, and between all collected levels of competition. Group comparisons were analyzed through independent *t*-tests. A significance level of $p < .05$ was used for all analyses.

3.3 QUALITATIVE PHASE

3.3.1 Purpose and Research Question

The second phase of this research was qualitative. The purpose of the qualitative phase was to explore how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating. This qualitative phase of the research used a collective case study framework. The intent of a case study is to look into the experience of a specific person or group to understand or explore qualitative research (Thomas, Nelson, & Silverman, 2011). A collective case study therefore is the culmination of individual cases that can be compared and brought together to depict the individual experiences of the participants (Creswell, 2007); in this case women athletes. As described by Thomas et al. (2011), a case study is often used to aid in the formulation of ideas, hypotheses, models, or definitions in areas of study that are developing and have not yet clearly established a structure to the area in question.

3.3.2 In-Depth Interviews

Individual in-depth semi-structured interviews with the participants explored how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating. In-depth interviews are described as seeking to understand how individuals perceive their experiences and make meaning of those experiences (Seidman, 2006). Semi-structured interviews follow a structure that is flexible and has an emphasis on participant input (Creswell & Plano Clark, 2011). Therefore, in-depth semi-structured interviews focused on the experiences of the individual while progressing through an interview that had room for significant participant input, not just asking a list of questions (see Appendix D1 for interview schedule). The interview went through a series of developmental stages that resulted in the final version. Members of the Sport Health and Exercise Psychology Lab at the University of Saskatchewan were consulted for input and suggestions during the development of the interview

schedule. This process resulted in an interview schedule that was clear, concise, and contained questions promoted genuine responses from the athletes. The interview flowed through three different sections. The first section was aimed at building rapport with the athlete. The questions were about their sport participation to help prime them to think about sport specific events. An example question from the first section of the interview is, "What is your favorite part of this sport?" In the second section of the interview the intent was to familiarize the women with self-compassion, body appreciation, and intuitive eating. To help familiarize the women with the constructs the athlete talked about what each construct meant to them, followed by a conversation about how the constructs are defined and organized by researchers. The athlete then provided an example of an experience that would be reflective of each construct. An example question from section two is, "Can you think of a time when you were compassionate to yourself as an athlete?" Finally, two separate drawing tasks made up the content of the third section of the interview. The participants worked through each task talking about how and why they think the subcomponents of the constructs were related. The full interview schedule was designed to provide insight into women's personal experiences of self-compassion, body appreciation, and intuitive eating and to describe the role of self-compassion in their experiences of body appreciation and intuitive eating.

3.3.3 Procedures

3.3.3.1 Pre-recruitment

The pre-recruitment stage for the qualitative phase of this research consisted of first identifying eligible athletes. Athletes from the quantitative phase of this research who (1) self-identified as high in self-compassion, body appreciation, and intuitive eating *and* (2) scored above the mid-point in each of these three scales were invited to participate in the qualitative phase of the research.

3.3.3.2 Recruitment & Consent

An e-mail request (see Appendix D2 for full e-mail communication) was sent to nine eligible participants. Potential participants were informed about the qualitative phase of the research (how it will expand on the quantitative phase), what would be required of them if they

decided to participate, their rights to withdraw, confidentiality, and how the results would be reported.

Any questions that they may have had prior to participation were answered via e-mail. Athletes who consented to participate were then scheduled for one-on-one in-depth semi-structured interviews, lasting approximately one hour (the interviews ranged from 39 minutes to 54 minutes long). Six women completed the qualitative phase. When the participant arrived she was provided time to read and ask questions about the informed consent form for the qualitative phase of the research (see Appendix D3 for phase two informed consent). Verbal confirmation of consent was also obtained before the interview began.

3.3.3.3 Data Collection

The in-depth semi-structured interviews took place in the Social Behavioural Sciences Lab (SBS Lab) at the University of Saskatchewan. The SBS Lab is located in the Physical Activity Complex (PAC 351) at the University of Saskatchewan. There is one main room – with table and chairs and white boards on the walls – with three smaller rooms attached. The interviews were conducted in the larger main room. The interview was audio recorded and later transcribed for analysis. The interviews helped to gain depth of understanding as to the role self-compassion plays in body appreciation and intuitive eating for women athletes.

During the design process a potential limitation arose that women athletes might misunderstand or misinterpret the construct of self-compassion, body appreciation, intuitive eating, and the related subcomponents during the qualitative phase because the concepts are not used in everyday language. To help address this potential limitation, during the interviews the participants were provided a "cheat sheet" that had descriptive information about self-compassion, body appreciation, intuitive eating, and the subcomponents. This strategy has previously been used in other self-compassion studies with athletes (e.g., Ferguson et al., 2014; Sutherland et al., 2014). After a discussion about each construct and subcomponents each participant was offered the opportunity to ask questions or make suggestions about how the construct is defined and organized. Making sure the athletes understood the constructs before going forward in the interview was an important aspect of the interview schedule design that better allowed me to answer my research question.

3.3.3.4 Exit Procedures

Upon completion of the interview participants went through standardized exit procedures. The exit procedures for this research study included thanking them for their time and responses, reassuring them of confidentiality, providing researchers' contact information in case other questions or additional information arose, and asking the participant if she would like to receive a copy of the research results (see Appendix D4 for full exit package).

3.3.4 Data Analysis

Verbatim transcriptions were made from the audio recordings from the interviews. The transcribing techniques suggested by Hesse-Biber and Leavy (2004) were followed for quality and accuracy of the transcriptions (see Appendix D5 for qualitative analysis flow chart). Things attended to while transcribing were: recording details such as length, rate of speech, number and length of silences, length of opening and closing statements, control of the interview, tone of the conversation, and how much of the time is spent asking questions. After transcription thematic analysis of all interview transcripts was performed. The following steps were used for thematic analysis in order to analyze salient themes and patterns in the transcripts. First, reading through the transcript to gain a holistic perspective of the interview. Second, going through the transcript to categorize themes. Finally, once all transcripts went through the first two stages the themes were tallied and analyzed based on magnitude and frequency of the specific theme. These stages of analysis are suggested by Creswell (2007) to improve the consistency and thoroughness of theme identification and assessment. Further, Stake (1995) suggested that data can be analyzed in two ways: categorical aggregation and direct interpretation. Categorical aggregation analysis is used to summarize similar data so that a statement can be made about the group, while direct interpretation is the analysis of one specific instance (Stake, 1995). Because this research is a collective case study the data was analyzed using both categorical aggregation and direct interpretation to give general and specific examples that describe the experiences of women athletes. An analysis chart was used to help identify the frequency of specific themes that arise in the interview transcripts (see Stake (1995) for an example chart on pg. 82).

3.4 TRUSTWORTHINESS

To address trustworthiness Guba's (1981) four criteria were used, including credibility, transferability, dependability and confirmability. These four components are advantageous for ensuring high quality qualitative research (Shenton, 2004). There are 14 suggestions made by Shenton (2004) for increasing credibility of qualitative research, with ways to ensure trustworthiness ranging from triangulation, to researchers' reflexivity, to member checking. Ensuring credibility is important as it aids in determining likeness from research to reality. The key details that a researcher should collect in order to state transferability range from descriptions of the participants to the time frame of data collection. Transferability is important in qualitative research as a description of who was studied along with other details of when, where, how, and why. Methodologists in qualitative research argue that because a small and specific sample is studied it is unlikely that the results would be generalizable to a larger population; instead the results are transferable to a similar group (Shenton, 2004). Dependability is critical in qualitative research as it addresses what positivists would call *repeatability*. To make sure a qualitative study is dependable three things need to be monitored: research design and implementation, operational details for data collection and procedures, and reflective appraisal of the project. Finally, trustworthiness can be upheld through confirmability (Shenton, 2004). Confirmability is how a researcher accounts for potential bias to make sure that findings are informed by the collected data and not by the "preferences of the researcher" (p.72). Typically a reflexivity is used to highlight the researcher's background and experiences that may influence interpretation of the collected data. Along with the reflexivity, an action plan that states how a researcher plans to account for his/her personal bias is useful.

Trustworthiness for this study was addressed in all four domains of credibility, transferability, dependability, and confirmability. Credibility of this research is upheld by: (1) using appropriate mixed methods, (2) by conducting background research related to relevant literature before entering the field, (3) triangulation of methods, (4) by using iterative questioning techniques to increase authenticity of participant responses, (5) by holding a debriefing session between the researcher and supervisor, who acted as a critical friend to facilitate reflection throughout data analysis and theme development, and (6) through member checking. Details regarding transferability such as who, when, where, how, and why are reported to uphold the requirements for transferability. Dependability in this research study has

been satisfied through detailed preparation and procedural information. This research also promotes trustworthiness through confirmability by the inclusion of reflexivity (see Appendix E for evidence of my reflexivity).

CHAPTER 4

QUANTITATIVE RESULTS

4.1 RESEARCH QUESTION AND PURPOSE

The research question posed for this research was, "what role does self-compassion play in women athletes' body appreciation and intuitive eating". The aim of the quantitative phase of this research was to examine the relationships between self-compassion and women athletes' body appreciation and intuitive eating. The role of self-compassion in women athletes' disordered eating, compulsive exercise, and self-criticism was also examined. Quantitative data was collected through the Demographic Survey, the Self-Compassion Scale (Neff, 2003b), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the Body Appreciation Scale (Avalos et al., 2005), the Intuitive Eating Scale-2 (Tylka & Kroon Van Diest, 2013), the Eating Disorder Examination-Questionnaire (Fairburn & Beglin, 1994), the Compulsive Exercise Test – Athlete Version (Plateau et al., 2014), and a measure of state Self-Criticism – Athlete Version (Mosewich et al., 2013). This chapter will present the results from the quantitative data collected during phase one.

4.2 RESEARCH HYPOTHESES

During this phase of research two hypotheses were tested.

Hypothesis 1:

Hypothesis one was that self-compassion would be significantly positively correlated with women athletes' body appreciation and intuitive eating, while being significantly negatively correlated with disordered eating, compulsive exercise, and self-criticism.

Hypothesis 2:

Hypothesis two was that self-compassion would contribute significant unique variance beyond self-esteem, after controlling for age and BMI, in women athletes' body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism.

4.3 QUANTITATIVE PHASE

4.3.1 Results

4.3.1.1 Inclusion and Exclusion

Potential participants were invited to take part in this research if they met the specified inclusion criteria: being a woman athlete, aged 18 to 27, with at least 2 years sport specific experience, having competed in the past 12 months, and currently competing at either the local, provincial, regional, national, elite for age, or international level. Pregnancy and related physiological, psychological, and social experiences have the potential to impact self-attitudes, body image, and eating behaviour (Downs, DiNallo, & Kirner, 2008). Therefore, athletes were excluded from participating if they reported to being currently pregnant or lactating to maintain a sample representative of women athletes. A total of 132 women athletes started the online survey. Participants, and all their data for all scales (complete and incomplete), were excluded if they had incomplete surveys (42), did not meet the inclusion criteria in some way (1), or were missing more than two items on any subscale (0). The final sample consists of 90 women athletes[8].

4.3.1.2 Participant Demographics and Descriptives

Demographic and descriptive characteristics of the women athletes were collected for the women athletes regarding a range of descriptive information including nationality and ethnicity. The sample of female athletes was predominantly of white ethnicity (95%) and Canadian nationality (95%).

The demographics survey also highlighted descriptive information about participants, such as self-reported age, weigh, and height (see Table 4.2). Body Mass Index (BMI) was calculated from athletes' self-reported weight in kilograms and height in meters (kg/m^2).

[8] This sample size (90) is sufficient to address the research question posed, based on the guidelines proposed by Tabachnick and Fidell (2007). The guideline is that samples should have a 5:1 ration for participants to predictors. In this study that would mean a minimum sample size of 35 participants would be enough to address the research question. Further this sample size is comparable to other related research (e.g., Cobb et al, 2003; Duckham et al., 2012).

Table 4.1 Phase one participant demographics for age, weight, height, and BMI

Variable	Range	Mean	Median	SD
Age (years)	18.25 – 27.5	21.25	20.50	2.30
Weight (kg)	42.73 – 105.55	66.46	63.64	12.26
Height (m)	1.54 – 1.90	1.70	1.69	0.08
BMI*	13.80 – 29.50	19.47	18.95	3.13

Note: * Body Mass Index (BMI) was calculated by inserting participant self-report weight (kg) and height (m) into the BMI formula (kg/ m^2)

In the demographic survey the women athletes responded to a set of questions regarding their medical history, menstrual functioning and onset, if they have an ideal weight and what that weight would be, and parameters of weight control. This information was collected to highlight descriptions of the sample in light of the female athlete triad. The main interrelated components of the female athlete triad consist of low energy availability, menstrual irregularities, and low bone density of which can occur singularly or in combination. Although the questions asked cannot diagnose the female athlete triad, the results can provide descriptive characteristics of my sample. A percentage of the women athletes in this sample self-reported a past history of medically diagnosed low bone density (1.11%), low energy intake (5.56%), and menstrual irregularities (22.22%).

As menstrual function is a key and observable component of the female athlete triad (Tietjen-Smith & Mercer, 2008), women responded to a set of questions regarding their current menstrual function, to determine what proportion of the sample were eumenorrheic, normally menstruating (10 > periods per year), and those who had irregular menses. Those who reported irregular menses were classified as either being oligomenorrhoeic (4-9 periods per year) or amenorrhoiec (0 to 3 periods per year;). The majority of women in this sample reported being eumenorrhoeic (10 or more periods per year; 83.33%). However, 16.67% of the women athletes reported currently having less than 10 periods per year, while 2.22% reported to be currently amenorrhoeic (0 to 3 periods per year; 2.22%), and 14.44% reported to be currently oligomenorrhoeic 4 to 9 periods per year (14.45%). All the women athletes reported age at menarche ranging from 10 to 19 years (M = 13.25, SD =1.58), by year and month. In this sample 13.33% of the athletes self-reported their age of menarche at 15 years of age or older, meaning that they self-reported primary amenorrhea (Nattiv et al., 2007).

Ideal weights and body type expectations are related to disordered eating behaviours (Levine & Piran, 2004). The women athletes in this sample responded to questions regarding the extent that they attempt to control their weight, their current weight, and if they have an ideal weight; calculations were then done to determine the discrepancy between the athletes actual and ideal weight. The women were presented with a question asking if and when they control their weight, where they could select all options that applied to them. 38.89% of the women in this sample (35) selected the option that they do not control their weight, while 61.11% of the women (55) responded that they attempt to control their weight in some way. These 55 women were distributed over three different groups of weight control: those who only control their weight during their competitive season (7.78%), those who control their weight only during the off season (13.33%), and those who control their weight during both their competitive season and their off season (40.00%).

Following the weight control question, the athletes were asked questions related to their weight ideals. The questions asked if they have an ideal weight that they strive toward, what there ideal weight is, and when was the last time they were at their ideal weight. The responses from athletes were that 52.22% (47) of the women stated that they have an ideal weight. For the women with an ideal weight the ideal weights women reported ranged from their current weight to 32.7Kg below their current weight.

4.3.1.3 Sport Participation Information

The last section of the demographic survey asked women athletes to provide information about their sport involvement (see Table 4.2). The women in this sample were involved in a variety of team/individual and aesthetic/non-aesthetic sports (e.g., volleyball, track and field, dance, and cheerleading). The women rated the importance of aesthetics in their primary sport on a scale from 1 (low importance) to 10 (high importance). Responses for the full sample ranged from 1 to 10 (M = 4.27, SD = 2.66). When the athletes are split into subgroups[9] based on sport type the rating of the importance of aesthetics in their primary sport varies: team sport responses ranged from 1 to 10 (M = 3.83, SD = 2.52), individual sport responses ranged from 1 to 10 (M = 5.46, SD = 2.73), aesthetic sport responses ranged from 5 to 10 (M = 7.57, SD = 1.55), and non-aesthetic sport responses ranged from 1 to 9 (M = 3.66, SD = 2.36).

Group comparisons were carried out using independent t-tests for the athletes' rating of the importance of aesthetics in their sport, comparing differences between team and individual sport groups and aesthetic and non-aesthetic sport groups. Levene's test result was not significant for the comparison between team and individual sport groups when rating the importance of aesthetics in sport F=0.693, p>0.05; therefore the assumption of equal variance was not violated. However, for the comparison between aesthetic and non-aesthetic sports groups there was a violation of the assumption of equal variance as the Levene's test result was significant F=4.478, p<0.05; therefore the equal variances not assumed t-statistics were compared. There was a significant difference between team and individual sport groups aesthetic scale responses $t(88)$=-2.644, p<0.05, indicating that the individual sport group had a higher aesthetic scale score (M = 5.46) than the team sport group (M = 3.83). There was also a significant difference between aesthetic and non-aesthetic sport groups aesthetics scale responses

[9] The sport types were classified based on team or individual competition and aesthetic and non-aesthetic sport. Recognizing that sport types lie on continuums between team and individual sport and aesthetic and non-aesthetic specific criteria were used to classify sports competition styles. Team sports were classified as sports where a group of individuals compete together to achieve a goal (e.g., basketball), while individual sports were classified as sports where athletes can compete as individuals or as a subset of athletes from their team (e.g., track and field). Aesthetic sports were classified as sports where technique or skills are evaluated (e.g., gymnastics), while non-aesthetic sports do not have points awarded based on how the athlete performs a skill (e.g., soccer).

$t(88)=7.887$, $p<0.001$, indicating that the aesthetic group had a higher aesthetic scale score (M = 7.57) than the non-aesthetics sport group (M = 3.66).

Table 4.2 Phase one primary sport participation frequencies and self-reported highest and current level of competition

Primary Sport	N	% of sample	Local		Provincial		Regional		National		Elite for Age		International	
			Current	Highest	Current	Highest	Current	Highest	Current	Highest	Current	Highest	Current	Highest
Basketball	**10**	11.11%	7	1		3		3	3	2				1
Cheerleading	**6**	6.67%							1	2	2	2	3	2
Curling	**3**	3.33%			1	1	2	1						1
Crossfit	**1**	1.11%			1	1								
Dance	**7**	7.78%			5	1	1	4			1	1		1
Fastball	**2**	2.22%			2			2						
Fencing	**1**	1.11%							1	1				
Football	**1**	1.11%					1	1						
Gymnastics	**1**	1.11%	1			1								
Ice Hockey	**7**	7.78%	3		1	1	2	2	1	3		1		
Kickboxing	**1**	1.11%											1	1
Ringette	**1**	1.11%			1	1								
Roller Derby	**1**	1.11%	1	1										
Rowing	**2**	2.22%			1			1	1	1				
Rugby	**2**	2.22%			1	1	1			1				
Soccer	**18**	20%	12	2	3	6	2	6	1	4				
Softball	**1**	1.11%	1					1						
Table Tennis	**1**	1.11%											1	1
Tae Kwon Do	**1**	1.11%							1	1				
Track and Field	**8**	8.89%			1	1	2	1	5	5				1
Triathlon	**1**	1.11%					1	1						
Ultimate Frisbee	**2**	2.22%			1				1	2				
Volleyball	**10**	11.11%	3	1	4	1	1	5	2	2				1
Wrestling	**2**	2.22%							2	2				
TOTAL	**90**		**28**	**5**	**22**	**18**	**13**	**28**	**19**	**26**	**3**	**4**	**5**	**9**

Note: Participants reported the highest level that they have ever competed in their primary sport as well as the level that they are currently participating for their primary sport as a part of the demographic survey.

4.3.1.4 Descriptive Statistics and Scale Reliabilities

The descriptive statistics and scale reliabilities are outlined below for the Self-Compassion Scale (SCS), the Body Appreciation Scale (BAS), the Intuitive Eating Scale-2 (IES-2), the Rosenberg Self-Esteem Scale (RSES), the Eating Disorder Examination – Questionnaire (EDE-Q), the Compulsive Exercise Test – Athlete Version (CET-AV), and for Self-Criticism – Athlete Version (SC-AV; see Table 4.3). The distributions for the IES-2 and the EDE-Q were normalized through the application of logarithmic and square root transformations, as recommended by Tabachnick and Fidell (2001) and Field (2009), because each violated recommended guidelines for skewness (i.e., skewness values were beyond +/- 2; Vincent & Weir, 2012). All analyses were then re-run with the transformed scales. The results and conclusions from the analysis with transformed scales did not differ from the results and conclusions of the non-transformed data. Therefore, the original scale distributions (non-transformed data) are reported. No outliers were detected, as there were no data points beyond 3 standard deviations from the mean. Therefore, no data points were removed from analysis.

Table 4.3 Phase one descriptive statistics and scale reliabilities for self-compassion, body appreciation, intuitive eating, self-esteem, disordered eating, compulsive exercise, and self-criticism

Variable (Measure)	Items	Range	Mean	Median	SD	Skewness	Kurtosis	Cronbach's α
Self-Compassion (SCS)	26	1.92 – 4.31	2.94	2.85	0.61	1.14	-1.57	.92
Body Appreciation (BAS)	13	2.15 – 5.00	3.67	3.81	0.65	-1.07	-0.94	.91
Intuitive Eating (IES-2)	23	1.87 – 4.43	3.33	3.37	0.53	-2.16	0.10	.88
Self-Esteem (RSES)	10	0.70 – 2.90	1.98	2.00	0.50	-0.69	-0.67	.88
Disordered Eating (EDE-Q)	28	0.06 – 4.84	1.57	1.33	1.23	2.99	-0.85	.95
Restraint	(5)	0.00 – 5.00	1.15	0.80	1.22			.76
Eating concerns	(5)	0.00 – 4.80	0.91	0.40	1.10			.80
Shape concerns	(8)	0.13 – 6.00	2.38	2.00	1.65			.92
Weight concerns	(5)	0.00 – 5.20	1.85	1.50	1.55			.86
Compulsive Exercise (CET-AV)	15	2.65 – 14.75	8.63	8.55	2.60	0.55	-0.54	.89
Mood improvement	(5)	1.80 – 5.00	3.86	4.00	0.86			.69
Weight control exercise	(4)	0.25 – 5.00	2.53	2.50	1.20			.84
Avoidance of negative affect	(6)	0.00 – 5.00	2.24	2.00	1.22			.90
Self-Criticism (SC-AV)	7	1.00 – 9.29	4.27	4.43	1.80	1.41	-0.35	.90

Note: # indicates the number of total scale items, while (#) indicates number of items per subscale
Skewness and Kurtosis values were calculated by dividing their standard errors (std. error of Skewness =.254; std. error of kurtosis =.503).

4.3.2 Conclusion

There is full support for the first hypothesis tested in phase one, as self-compassion held significant relationships with women athletes' body appreciation (r=.68, p<0.01, r^2=.462 [medium effect size]), intuitive eating (r=.53, p<0.01, r^2=.284 [small effect size]), disordered eating (r=-.59, p<0.01, r^2=.349 [medium effect size]), compulsive exercise (r=-.37, p<0.01, r^2=.142 [small effect size]), and self-criticism (r=-.45, p<0.01, r^2=.204 [small effect size]) in the expected directions (see Table 4.4). Further, self-compassion also held significant relationships in the expected directions with all four subscales of disordered eating and two of the three subscales of compulsive exercise (see Appendix F1 for full correlation table including BMI and self-compassion subscales).

There is also full support for the second hypothesis tested in the quantitative phase. Regression analysis highlighted that self-compassion contributed significant unique variance beyond self-esteem in women athletes' body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism (see Table 4.5). The unique variance accounted for by self-compassion beyond self-esteem, after controlling for age and BMI, ranged from 4.1% (body appreciation) to 8.7% (intuitive eating), with the total explained variance accounted for in these models ranging from 14.7% (compulsive exercise) to 61.2% (body appreciation). Not only did self-compassion contribute significant unique variance beyond self-esteem in the global scores for disordered eating and compulsive exercise, but self-compassion also contributed significant unique variance to all four subscales of disordered eating, ranging from 4.3% (restraint) to 10.5% (shape concern), and two of the three subscale of compulsive exercise: 4.2% (weight control exercise) and 12.0% (avoid negative affect). All effect sizes were small for the unique variance accounted for by self-compassion in the regression analyses.

As would be expected self-compassion and self-esteem were strongly correlated and significantly related in the same directions with body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism (see Table 4.4).

Table 4.4 Phase one Pearson Product Moment correlations for self-compassion, body appreciation, intuitive eating, self-esteem, disordered eating, compulsive exercise, and self-criticism and measure subscales

	1.	2.	3.	4.	5.	5.a	5.b	5.c	5.d	6.	6.a	6.b	6.c
1. Self-Compassion	- - -												
2. Body Appreciation	.680**	- - -											
3. Intuitive Eating	.533**	.643**	- - -										
4.Self-Esteem	.734**	.729**	.443**	- - -									
5. Disordered Eating	-.591**	-.708**	-.730**	-.505**	- - -								
5.a Restraint	-.356**	-.397**	-.622**	-.278**	.786**	- - -							
5.b Eating Concern	-.507**	-.598**	-.666**	-.462**	.875**	.629**	- - -						
5.c Shape Concern	-.642**	-.766**	-.675**	-.560**	.938**	.594**	.767**	- - -					
5.d Weight Concern	-.561**	-.703**	-.646**	-.467**	.947**	.640**	.766**	.912**	- - -				
6. Compulsive Exercise	-.377**	-.370**	-.425**	-.248*	.538**	.423**	.520**	.506**	.474**	- - -			
6.a Mood Improvement	-.021	.028	-.005	.046	.078	.063	.164	.051	.026	.704**	- - -		
6.bWeight Control Exercise	-.361**	-.545**	-.581**	-.291**	.697**	.541**	.556**	.686**	.671**	.767**	.235*	- - -	
6.c Avoidance of Negative Affect	-.436**	-.274**	-.331**	-.276**	.409**	.327**	.447**	.371**	.333**	.881**	.564**	.489**	- - -
7. Self-Criticism	-.452**	-.435**	-.328**	-.347**	.494**	.352**	460**	.468**	470**	.247*	-.059	.303**	.272**

Note: Self-Compassion Scale (SCS), Body Appreciation Scale (BAS), Intuitive Eating Scale (IES-2), Eating Disorder Examination-Questionnaire (EDE-Q), Compulsive Exercise Test-Athlete Version (CET-AV), Self Criticism-Athlete Version SC-AV).
1=Self-compassion (SCS), 2=Body appreciation (BAS), 3=Intuitive eating (IES-2), 4= Self-esteem (RSES), 5= Disordered eating (EDE-Q), 5.a= restraint, 5.b= eating concerns, 5.c= shape concerns, 5.d= weight concerns, 6= Compulsive exercise (CET-AV), 6.a= mood improvement, 6.b= weight control exercise, 6.c= avoidance of negative affect, 7= Self-criticism (SC-AV)
Degrees of freedom (88)
*$p < 0.05$ (two-tailed).
** $p < 0.01$ (two-tailed).

Table 4.5 Phase one hierarchical regression analysis for body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism and subscales

Variable (Measure)	B	SE B	β	R^2	ΔR^2
Body Appreciation					
Step one				.043	.043
Age	.012	.030	.041		
BMI	-.042	.022	-.205		
Step two				.571	.528***
Age	-.005	.020	-.019		
BMI	-.041	.015	-.197**		
Self esteem	.948	.092	.729***		
Step three				.612	.041**
Age	-.009	.019	-.032		
BMI	-.038	.014	-.184**		
Self esteem	.663	.130	.510***		
Self-compassion	.317	.106	.300**		
Intuitive Eating					
Step one				.028	.028
Age	.029	.024	.127		
BMI	-.019	.018	-.114		
Step two				.215	.187***
Age	.021	.022	.090		
BMI	-.018	.016	-.109		
Self esteem	.460	.102	.434***		
Step three				.303	.087**
Age	.017	.021	.072		
BMI	-.015	.015	-.090		
Self esteem	.122	.142	.115		
Self-compassion	.377	.115	.437**		
Disordered Eating					
Step one				.075	.075*
Age	-.054	.055	-.101		
BMI	.102	.041	.259*		
Step two				.322	.247***
Age	-.032	.048	-.059		
BMI	.100	.035	.253**		
Self esteem	-1.234	.221	-.498***		
Step three				.416	.094***
Age	-.022	.045	-.040		
BMI	.092	.033	.234**		
Self esteem	-.414	.303	-.167		
Self-compassion	-.912	.247	-.453***		

# Restraint					
Step one				.057	.057
Age	-.099	.055	-.187		
BMI	.059	.040	.153		
Step two				.125	.069*
Age	-.088	.054	-.165		
BMI	.058	.039	.150		
Self esteem	-.642	.247	-.263*		
Step three				.168	.043*
Age	-.081	.053	-.153		
BMI	.053	.039	.137		
Self esteem	-.097	.356	-.040		
Self-compassion	-.606	.291	-.305*		
# Eating Concern					
Step one				.014	.014
Age	-.028	.051	-.058		
BMI	.037	.037	.106		
Step two				.224	.210***
Age	-.009	.046	-.020		
BMI	.036	.033	.101		
Self esteem	-1.016	.211	-.459***		
Step three				.282	.058*
Age	-.002	.044	-.005		
BMI	.030	.032	.086		
Self esteem	-.442	.300	-.200		
Self-compassion	-.639	.244	-.355*		
# Shape Concern					
Step one				.073	.073*
Age	-.041	.074	-.057		
BMI	.140	.054	.266*		
Step two				.381	.308***
Age	-.008	.061	-.011		
BMI	.136	.045	.260**		
Self esteem	-1.840	.281	-.557***		
Step three					
Age	.007	.056	.009	.486	.105***
BMI	.125	.041	.238**		
Self esteem	-.683	.379	-.207		
Self-compassion	-1.287	.309	-.479***		
# Weight Concern					
Step one				.123	.123**
Age	-.048	.068	-.071		
BMI	.171	.050	.346***		
Step two				.335	.212***

Age	-.022	.060	-.033		
BMI	.169	.044	.341***		
Self esteem	-1.436	.274	-.462***		
Step three				.424	.089***
Age	-.010	.056	-.014		
BMI	.159	.041	.321***		
Self esteem	-.434	.378	-.140		
Self-compassion	-.1.115	.308	-.441***		
Compulsive Exercise					
Step one				.002	.002
Age	.013	.121	.011		
BMI	.037	.089	.045		
Step two				.064	.062*
Age	.037	.118	.032		
BMI	.035	.087	.042		
Self esteem	-1.305	.546	-.250*		
Step three				.147	.083**
Age	.057	.114	.050		
BMI	.019	.083	.023		
Self esteem	.315	.770	.060		
Self-compassion	-1.803	.628	-.426**		
# Mood Improvement					
Step one				.026	.026
Age	.035	.040	.092		
BMI	-.038	.029	-.137		
Step two				.028	.001
Age	.033	.040	.089		
BMI	-.038	.029	-.137		
Self esteem	.064	.185	.037		
Step three				.037	.009
Age	.036	.040	.095		
BMI	-.039	.029	-.143		
Self esteem	.239	.272	.138		
Self-compassion	-.195	.221	-.139		
# Weight Control Exercise					
Step one				.035	.035
Age	-.042	.055	-.082		
BMI	.065	.040	.170		
Step two				.115	.081**
Age	-.030	.053	-.058		
BMI	.064	.039	.167		
Self esteem	-.683	.244	-.285**		
Step three				.157	.042*
Age	-.023	.052	-.045		

BMI	.059	.038	.154		
Self esteem	-.154	.352	-.064		
Self-compassion	-.589	.287	-.302*		
# Avoid Negative Affect					
Step one				.002	.002
Age	.021	.057	.039		
BMI	.010	.042	.025		
Step two				.081	.078**
Age	.033	.055	.063		
BMI	.009	.040	.022		
Self esteem	-.686	.254	-.281**		
Step three				.201	.120***
Age	.045	.052	.084		
BMI	<-.000	.038	<.000		
Self esteem	.230	.349	.094		
Self-compassion	-1.019	.285	-.513***		
Self-Criticism					
Step one				.049	.049
Age	-.106	.082	-.136		
BMI	.103	.060	.181		
Step two				.162	.112**
Age	-.084	.077	-.107		
BMI	.101	.057	.177		
Self esteem	-1.213	.357	-.337**		
Step three				.237	.075**
Age	-.071	.074	-.090		
BMI	.091	.054	.159		
Self esteem	-.144	.503	-.040		
Self-compassion	-1.189	.410	-.406**		

Note: Degrees of freedom at step one = 87, at step two = 86, and at step three = 85.
* = $p < 0.05$
** = $p < 0.01$
*** = $p < 0.001$
# = subscale analysis
Self-Compassion Scale (SCS), Body Appreciation Scale (BAS), Intuitive Eating Scale (IES-2), Eating Disorder Examination-Questionnaire (EDE-Q), Compulsive Exercise Test-Athlete Version (CET-AV), Self Criticism-Athlete Version SC-AV).

CHAPTER 5

QUALITATIVE RESULTS

5.1 RESEARCH QUESTION

The research question posed for the overall research project was, "what role does self-compassion play in women athletes' body appreciation and intuitive eating". To help answer the research question the purpose of the qualitative phase was to explore how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating. To seek answers to the research question and address the purpose of this phase six one-on-one semi-structured interviews were conducted with eligible women athletes. In this phase the maladaptive constructs (i.e., disordered eating, compulsive exercise, and self-criticism) were not discussed with the women athletes for two reasons. The first justification is that the primary focus of my research was on constructs informed by positive psychology to help balance to the literature in the area. In addition, based on the quantitative results, I was confident in moving forward with a focus specifically on body appreciation and intuitive eating, specifically the correlational and regression analysis results gave me the confidence to move forward and discuss the positive constructs that are currently not discussed in depth in the literature (i.e., body appreciation and intuitive eating). However, a more pragmatic reason is that the inclusion of additional constructs would have made the interviews too long, at the expense of the primary goals of my research.

5.2 PARTICIPANTS

Nine women athletes from phase one self-identified as being self-compassionate, body appreciative, intuitive eaters, and scored above the midpoint of these same three scales (self-compassion, body appreciation, and intuitive eating) and were invited to participate in phase two[10]. Six Canadian women participated in qualitative semi structured interviews[11][12]. The women ranged in age from18 to 24 years (M = 21.06), ranged in weight from 52.27Kg to 76.36Kg (M = 62.29Kg), their height ranged from 1.60m to 1.80m (M = 1.71m), and the athletes' BMI ranged from 16.30 to 21.20 (M = 18.20). The women (Amanda, Amy, Elise, Jane, Jennifer, and Lillian[13]) reported that they participate in a range of sports that are categorized as team or individual and aesthetic or non-aesthetic (i.e., cheerleading, long distance running, soccer, volleyball, and wrestling). Further, at the time of data collection the women were currently competing at a range of competition levels (local, provincial, and regional levels), with the highest the women had ever competed ranging from the regional to national levels. Finally, three of the six women reported that they have an ideal weight that is below their current weight, three women identified that they control their weight, and five of the six women reported normal menstruation (10 or more).

5.3 THEMES

Three primary themes arose from the one-on-one interviews with the women athletes about the role of self-compassion in their experiences of body appreciation and intuitive eating. The three themes represented the way that self-compassion helps them in (1) recognizing the

---

[10] The three women who were invited to participate in the qualitative phase elected to not participate because they were (1) no longer interested in participation, (2) because of busy schedule, and (3) for an unknown reason.

[11] It has been suggested that data saturation occurs at different points based on goals of the research (Saumure & Given, 2008). In this study six participants was enough to reach saturation as content was consistent between interviews and there are also distinct aspects represented from individual, team, aesthetic, and non-aesthetic athletes, which satisfies the goal of explaining self-compassion, body appreciation, and intuitive eating experiences for women athletes. Further, this sample size is comparable to other research in the area (e.g., Sutherland et al., 2014).

[12] Lillian selected multiple options (white and other) when describing her ethnicity during the phase one demographic survey, while all other participants identify as white women.

[13] The participants selected their own pseudonyms at the beginning of the interview before the audio recording started.

uniqueness of sport contexts, (2) promoting awareness, and (3) setting realistic standards and expectations for themselves.

5.3.1 The Uniqueness of Sport

The first theme of the qualitative phase was that self-compassion plays a role in women athletes' body appreciation and intuitive eating by helping women athletes to recognize the uniqueness of sport contexts. The women athletes talked about how they view their bodies and approach to eating differently from women in general. First, in sport contexts it is important to be able to value what the body can do regardless of physical appearance. The second uniqueness that the women identified is that intuitive eating is different for athletes than non-athletes because of training and competition schedules.

The women athletes often discussed how self-compassion helps them to appreciate their bodies by recognizing that sport contexts are unique. Self-kindness helped to promote positive thoughts and feelings that the women had about their physical bodies, while mindfulness helped the women to recognize that in sport contexts what the body can do is more important than how the body looks. Specifically, the athletes expressed that self-compassion could help them to value what their bodies could do for them, in their respective sports, over and beyond the aesthetic appearance of the physical body. *Amy* described a situation where she valued and embraced what her body was capable of during competition, which was important to her because she didn't always feel strong or fit. She said:

> "Looking in the mirror and being just like, I like the work that I've put in and I like what I see. And when I wrestle … I wasn't super tired and I obviously worked hard and all that, but my body is in really good condition; and I just really feel really good because my body was, I could tell that my cardio was good and my strength was good. And I was just feeling like really good in my body, and it was doing what I wanted it to, and just my mind was good."

Self-compassion helped the women athletes feel thankful and happy about how their bodies could preform. They used words such as strength, power, aptitude, achievement, development, skill, and fitness when describing reasons to appreciate their bodies in sport. These reasons were tied to a variety of positive words that expressed how their athletic abilities made them feel. A few of the words used were thankful, happy, lucky, proud, grateful, impressed, graceful, excitement, and joy. The women were able to have a deeper appreciation of their bodies through self-compassion, because self-compassion helped the women recognize that in sport contexts it is

more important for the body to be able to perform skills than to look a certain way. Being able to appreciate the body for what it can do was slightly more challenging for the women from weight classed sports, such as cheerleading and wrestling. The two women in weight conscious sports said that they couldn't just focus on what their bodies can do in sport because to compete they had to maintain a specific weight. However, when *Amy* and *Amanda* saw past the weight restrictions and requirements in their sport contexts, they were able to appreciate what their bodies were able to do.

Further, recognizing that sport contexts are unique helped the women athletes to eat intuitively. The athletes talked about how self-compassion, specifically mindfulness, helped them to see that the eating demands for athletes are different. Recognizing that being involved in sport changes eating needs and behaviours was important for these athletes. Being mindful about sport contexts helped the women to identify two main ideas about what athletic intuitive eating looks like: sometimes eating when not hungry and having forbidden foods. The athletes said that eating when not hungry and having forbidden foods is a part of athletic intuitive eating because these behaviours help athletes to perform their best.

Several of the athletes spoke about how they need to plan their eating to properly prepare for training and competitions. While discussing the construct of intuitive eating, *Jennifer* talked about how she cannot always rely on hunger cues to signal her eating:

> "I think that reliance on hunger cues especially could differ when in athletes, because I know I need to eat before I'm hungry sometimes in the morning, I don't always want to, but I know I need to so that I can. That's just kind of a, I'm kinda like, sometimes it would be easy to wait until I'm hungry to start eating. But that would be halfway through my workout so that just wouldn't work."

The athletes challenged one aspect of intuitive eating, reliance on hunger cues, because simply eating when they were hungry could have a negative impact on their athletic performance. They suggested that although scheduled eating is typically seen as ridged and potentially disruptive (consistent with the American Psychiatric Association, 2013), eating at specific times was in their best interest.

The mindfulness aspect of self-compassion also helped the athletes to recognize another unique aspect of sport participation: that there are specific foods that the athletes will not and should not eat before training or competition. Although the intuitive eating construct states that having forbidden foods is not adaptive (Tylka & Wood Barcalow, 2013), the women athletes

suggest that there are specific foods that do not help them perform well. Mindfulness helped the athletes through trial and error making a list of situation specific forbidden foods, and learning over time what works best for them in terms of what to eat before they workout, practice, and compete. *Jane* talked about how she always eats the same breakfast on race day because she knows how it will make her body feel. She expanded on this thought when saying:

> "Sometimes an example might be when, like the marathon starts at like eight in the morning or something. So I have to get up early and I'm not, I don't really love breakfast, like when I get up I'm just not hungry. But I know that I'm going to run a race, so I like, I always have a really good breakfast that day, because I know that my body needs that [breakfast] to perform to its best."

The women suggested that it is important for them to consider the timing and content of their eating because it directly impacts how they feel during training and competitions, which in turn impacts their performance and success in sport.

For these women athletes, self-compassion played a role in their body appreciation and intuitive eating by allowing them to recognize that sport contexts are unique. The athletes suggested that self-kindness and mindfulness were particularly helpful in recognizing what the body can do and how to best fuel the body in sport. Learning to value what the body can do was important for the athletes to appreciate their bodies in sport contexts regardless of their appearance and to eat in a physiologically based way that would promote athletic success.

5.3.2 Compassionate Awareness

Another theme that surfaced during the interviews was that self-compassion plays a role in women athletes' body appreciation and intuitive eating through the development of awareness. The women athletes felt that self-compassion helped them to develop self-awareness and awareness of what is in the media related to images of the thin ideal; suggesting that the positive awareness they experience through self-compassion stems from the subcomponent mindfulness. Neff (2003a) says that mindfulness helps individuals to maintain a balanced awareness that can prevent over-identification with negative events and feelings. The women said that awareness helps them to better appreciate their bodies and to eat in adaptive physiologically based ways.

As mentioned, self-compassion plays a role in women athletes' body appreciation by helping women to become aware of what is in the media. Being aware of what is in the media contributes to body appreciation because it helps women to realize that media images represent

cultural ideals of beauty. The athletes discussed that technology and social media have led to a culture in which they are exposed to a large number of idealistic images every day. *Jennifer* spoke about how she not only sees images of the thin ideal every day, but that the ideals are also becoming athlete focused.

> "I think, in society as of late it [the body ideal] has shifted more and more with fitness, and you want to have those flat six pack stomachs and abs, and they [media outlets] are saying that "strong is the new sexy", … when I was younger it was these tiny little models and these skinny models that what I wanted to look like; but now it's more like, it's more attractive to have muscle. But a certain kind of muscle…not being really big or bulky, but being very thin and tall and a little bit muscular … I see the pictures of the girls and they are super athletic and they look like, they look strong but still so thin. It's kind of a contradiction."

The images in media are becoming highly salient for women athletes with the prevalence of athletic images that represent the thin ideal. Images of the athletic ideal make it challenging for them to recognize that they are images of the thin ideal. However, the athletes expressed that by becoming aware of the ideals that media images represent they were better equipped to appreciate their bodies by rejecting the unrealistic images.

Further, the women athletes said that awareness helped them to appreciate their bodies by engaging in healthy behaviours. The women gave several examples of how self-compassion contributed to their ability to treat the body well. For example *Amanda* said that for her, self-compassion helped her to appreciate her body by having respect for her body:

> "A lot of the time we are told to just push through injuries, but I understand when to and when not to… You can just tell when something is more serious…[when the injury is perceived as serious] I say I need to sit out and ice and I make an appointment with physio…"

In this example *Amanda* shows how being aware of what her body needs is an important part of her body appreciation and healthy decision making as an athlete. The other women talked about injury experiences and said that being aware of what the body needed was one way self-compassion helped them to respect and appreciate their bodies. Being aware of the body helped the athletes make decisions about if they should continue to train and compete or to focus on rest and recovery, following through with their physiotherapy, and even talking to their coaches and sitting out during training to prevent getting injured. The athletes suggested that knowing when to push through and when to sit out is body appreciation and self-compassion because they will not knowingly do harm to the physical body.

According to the interview data, awareness also promotes women athletes' intuitive eating. The women athletes said that when they were aware they were more likely to eat for physical reasons; suggesting that when they are aware, it is easier to tell the difference between eating for physical reasons and eating for emotional reasons. Therefore, self-compassion plays a role in women athletes' intuitive eating by helping them to be more aware of the reasons they are eating. *Elise* talked about how awareness helped her to identify when she was eating for emotional reasons when she said:

> "Okay, so this [mindfulness] is just being aware of like yourself and what's going on. And you have to like be aware of like your motivation for eating like, "am I doing it [eating] because I'm bored, am I doing it [eating] because I'm just really depressed right now and I just need something to make me fee better?"

Being able to tell the difference between eating for physical reason and emotional reasons was important for the athletes because the women valued eating, in part, as an important way to fuel the body.

Awareness also assisted the women to make nutritious food choices. Making food choices that fuel the body to perform well and efficiently is the aspect of intuitive eating called body-food choice congruence (Tylka & Wood Barcalow, 2013). The athletes expressed in many different ways the importance of their food choices on their athletic performance. For example, *Amy* said: "there's stuff you know you shouldn't eat. Especially coming up to competition, or like, eating a chocolate bar before practice you'll probably feel pretty crappy as apposed to like a granola bar or something else." *Amy* went on to say that she felt she was being self-compassionate toward herself through her food choices, because when she ate well she was setting herself up to do the best she could in sport.

The food choices that the athletes spoke about during their interviews highlight that athletes need to be aware of what they put into their bodies so they can perform to their best ability; *Jennifer* talked about how she needed to be aware of what her body needs every day, because to continue to improve in her sport there are days when she needs to eat before she is hungry in the morning, needs to pack a lunch and a dinner to take to campus with her, and needs to prepare her body for competition by resisting foods that do not help her to achieve her athletic goals. The women athletes spoke about situations where they needed to, and should think about, the content of their food so that their body could function well. Although the women suggested that intuitive eating may be different for women athletes than for non-athletes, they said that

eating for physical reasons was the most adaptive way that they could approach fueling their bodies, which is also consistent with the general construct of intuitive eating. The women went further to say that they had to be aware and in tune with their bodies to be able to make food choices that would help them rather than leave then feeling distracted, tired, or ill.

5.3.3 Personalized Expectations

The third theme from phase two was that self-compassion plays a role in women athletes' body appreciation in helping them to set realistic and appropriate standards and expectations for themselves. The women athletes said that being flexible or being able to adapt to situations helped them to set appropriate standards and expectations for themselves, without feeling the need to strive toward external unrealistic standards. The athletes suggested that the flexibility to adapt came primarily from the self-kindness and mindfulness components of self-compassion.

More specifically self-compassion plays a role in women athletes' body appreciation because self-compassion helps women to reject unrealistic images of the thin ideal. *Amy* was able to recognize that for her media images were not a standard she expected herself to attain:

> "Just being critical about what you see and being like, … only a few people can attain [the thin ideal], there's no way to attain that, and I don't want to try to attain that because it's just not realistic and not what I want and not what my body wants or can handle."

Rejecting media images allowed them to set realistic and appropriate standards and expectations for their bodies. Holding more realistic expectations on the other hand helped the athletes to appreciate their bodies the way they are and for what their bodies can currently do.

The athletes expressed that they often, on a daily basis in some cases, think about the way their bodies look aesthetically. However, they suggested that self-compassion, specifically the self-kindness and mindfulness components of self-compassion, helped them to recognize media images and ideals as unrealistic. *Elise* stated that self-kindness helps her to protect her body image, which she provided an example of in saying, "Protecting body image by rejecting unrealistic images of the thin ideal is related to self-kindness because once again you just think the opposite would be thinking that you need to be that thin ideal; and that's just putting pressure on yourself to be something that's unrealistic." This quote illustrates how when the women athletes were able to recognize that the media images were unrealistic they were able to

appreciate their bodies through the rejection of unrealistic ideals and establish realistic expectations for themselves.

When the athletes experienced injuries self-compassion was particularly useful to adjust or modify what they expected their bodies to be able to do. The contrast between their healthy and unhealthy bodies helped the women to recognize how skilled they are, which put their expectations in perspective. As an example, *Lillian* described how her history with sport-specific injury led her to become aware of what her body is capable of; more specifically, her experiences with injury helped her to recognize and appreciate what her body could do. She said:

> "When you're unhealthy you realize how much you value your body when it is healthy. And so I think that some of the experiences I've had helped me to really appreciate being healthy and having the body that I do have. Being able to do the things that I do; not just looks, but physical capabilities."

Realizing what their bodies were capable of during the challenging experience of injury helped them to reassess the expectations that they held of themselves and be able to accept those changing expectations. *Jane* expanded on the value of setting reasonable expectations for herself when she talked about how her last race season was her best ever as a result of earning a personal best in two different distances. She went on to say that it would be unrealistic to expect to get a new personal best at every event, but that by setting several smaller goals she was able to achieve more in her sport by the end of a season than when she set lofty goals. She felt encouraged and positive about what her body could do when she was setting standards and expectations that were reasonable for her.

Self-compassion also helped the women to set realistic expectations for themselves regarding their eating, especially in promoting a balanced view of their eating behaviour. They said that when they were flexible and balanced with their eating they were showing themselves compassion. The women suggested that a balanced approach to eating was self-compassionate because it left room for them to enjoy the occasional treat such as pizza or ice cream and to not get too upset with themselves if they didn't eat right all the time. However, the women also stated that it was important for them to recognize that deserts and treat foods were not something that they would choose everyday. Essentially, self-compassion helped the athletes to set realistic expectations for their eating behaviour by promoting flexibility. Finally, and perhaps most insightful into the role of self-compassion in their experiences, the women said that self-

compassion was part of their intuitive eating because it would be unkind to the self if they didn't properly fuel their bodies and then still expected their bodies to perform well.

CHAPTER 6

DISCUSSION

6.1 DISCUSSION

6.1.1 Introduction to the Discussion

The intent of the current mixed methods research study was to apply quantitative and qualitative methods to better understand the role of self-compassion in women athletes' body appreciation and intuitive eating. The purpose of the quantitative phase was to examine the relationships between self-compassion and women athletes' body appreciation and intuitive eating, resulting in positive relationships between self-compassion and both constructs. Further, the quantitative phase also showed negative relationships between self-compassion and women athletes' disordered eating, compulsive exercise, and state self-criticism. Theory suggests that age and BMI can impact women body image and eating (Cash & Smolak, 2011; Lox et al., 2006), in this study age and BMI were not correlated with the outcome variables. This may be possible because the current sample represent restricted age and BMI. However, both age and BMI were left in the regression analysis because of decisions made a priori based on theory before data collection.

To gain a deeper understanding of the role of self-compassion in women athletes' body appreciation and intuitive eating a qualitative phase followed that explored how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating, which sheds lights on the role of women athletes' self-compassion in experiences of body appreciation (e.g., being aware of what the body can do) and intuitive eating (e.g., eating for physical reasons that will promote athletic performance). Therefore, the research is an explanatory sequential design, where the qualitative findings highlight and add voice to the quantitative data (Creswell, 2014).

Beyond supporting the importance of self-compassion for women athletes, this research contributes to the understanding of the role of self-compassion in women athletes' body appreciation, intuitive eating, disordered eating, compulsive exercise, and state self-criticism. Both hypotheses from the quantitative phase were supported. The results related to hypothesis

one are consistent with positive relationships between self-compassion and body appreciation (e.g., Wasylkiw et al., 2012), as well as negative relationships between self-compassion and self-criticism and disordered eating (e.g., Mosewich et al., 2013; Raes, 2010). Results related to the second hypothesis are also consistent with other studies that show that self-compassion contributes beyond self-esteem to women athletes' body appreciation (Wasylkiw et al., 2012). Thus, the results from the quantitative phase are consistent with previous research, while building on past research by considering other variables such as women athletes' intuitive eating, and compulsive exercise.

Although effect sizes were small for the unique variance accounted for by self-compassion in the regression analyses, the results are still valuable to consider for three reasons. First, the results are consistent with past research and further suggest that self-compassion consistently contributes unique variance beyond self-esteem (Magnus et al., 2010; Mosewich et al., 2011). Secondly, the results from this study are slightly stronger than results from past research that has found between 1.8% (obligatory exercise) and 4.2% (social physique anxiety) unique variance accounted for by self-compassion (Magnus et al., 2010) and between 2.7% (objectified body consciousness) and 10.6% (fear of negative evaluation) unique variance accounted for by self-compassion (Mosewich et al., 2011). This suggests that self-compassion is a complimentary resource to self-esteem.

Currently self-esteem[14] is one of the primary tools promoted in athletic settings to help foster positive experiences (Crocker, 2011). However, because self-esteem has a social comparative component, there is need for a complementary construct that can help protect women athletes from self-criticism, which is associated with social-comparison, obsession, and rumination (Mosewich et al., 2011; Neff, 2003a). The current findings support the statement made in previous research that self-compassion may be a useful tool for women athletes to manage potential challenges relevant in the sport context (e.g., Mosewich et al., 2013; Mosewich et al., 2011; Neff, 2003a).

[14] Self-esteem is promoted in a variety of settings from education and business to psychotherapy (Myers, 2008, pg. 451-455).

6.1.2 Discussion of Positive Constructs

Based on recommendations from previous research (e.g., Cash & Smolak, 2011), my research study considered constructs informed by positive psychology of self-attitudes, body image, and eating. Both quantitative and qualitative data was gathered on women athletes' self-compassion, body appreciation, and intuitive eating. Overall, the research findings indicate that self-compassion plays an important role in women athletes' positive experiences of body appreciation and intuitive eating in sport[15].

Quantitatively self-compassion was positively related to women athletes' body appreciation and intuitive eating. Self-compassion was also found to be significant beyond self-esteem, after controlling for age and BMI, in both constructs. The correlational and regression findings support past research, which has linked self-compassion to body appreciation for women athletes (e.g., Wasylkiw et al., 2012). The current findings also connect self-compassion to women athletes' intuitive eating, which has not previously been explored. Thus, it appears that self-compassion likely plays an important role beyond self-esteem in women athletes' healthy and adaptive body image and eating attitudes and behaviours. The role of self-compassion in body appreciation and intuitive eating is discussed more fully in the following two sections.

6.1.2.1 Body Appreciation

It is important to recognize that self-compassion might play a role in women athletes' body appreciation because poor body image can be a catalyst for women athletes to engage in maladaptive thought and behavioural patterns such as disordered eating and compulsive exercise (Cash & Smolak, 2011; Mosewich et al., 2011; Plateau et al., 2014). All three positive subcomponents of self-compassion (self-kindness, mindfulness, and common humanity) were related to higher levels of body appreciation in the quantitative phase. Further, the women athletes interviewed during the qualitative phase of this study expressed that each subcomponent of self-compassion played a unique role in their body appreciation.

[15] In the interview the women were asked to draw connections between the subcomponents of self-compassion to the subcomponents of body appreciation and intuitive eating. As a part of the qualitative analysis to assess athlete consensus a tally chart was created (see Appendix F2 for phase two tally chart).

Self-kindness promotes caring and understanding toward the self (Neff, 2003a) and seemed to play a role in the way the women athletes in my research treated, perceived, and felt about their physical bodies. Particularly in the qualitative phase of my research, the athletes expressed that self-kindness could help them to appreciate their bodies because self-kindness helps them to remain positive about their bodies. An example that the women spoke to was the ability to embrace what the body can do. The link between self-compassion and positivity has been supported in recent research with women athletes (Ferguson et al., 2014). In my research, the focus on physical ability over physical appearance helped the athletes to gain a deeper and more meaningful positive connection with their bodies.

Mindfulness can contribute to women athletes' body appreciation through awareness; mindfulness, as presented by Neff (2003a) is a state of awareness, which should facilitate the athletes an awareness to view their bodies clearly. The women talked about how mindfulness helped them to accept the body and to respect the body. However, the athletes also suggested that the biggest role mindfulness played in their body appreciation was to help them to be aware of and to reject media images that represent cultural beauty ideals. Through mindfulness the athletes felt protected from media images of the thin ideal, which is particularly important as the types of women portrayed in the media images are becoming thinner (Koyuncu et al., 2010). The women athletes also expressed that they recognize that the cultural ideals of beauty are also shifting toward a more athletic ideal, which is not surprising given that women athletes are often considered to represent the cultural ideal of physical perfection (Sundgot-Borgen & Trostviet, 2010). Therefore, mindfulness might be particularly useful for women athletes to become aware of and to reject salient images and messages of the perfect athletic body, in turn potentially helping women to appreciate their bodies.

The importance of common humanity in the women athletes' body appreciation was clearly expressed by the athletes when they discussed body image as a common struggle. The athletes talked about how many athletes wish their bodies were different in some way, and that a feeling of discontent was expected. The athletes described that common humanity was most valuable to help protect their body image by helping them not feel alone. The women stated that interconnectedness based on shared experiences was related to the aspect of body appreciation that helps women to protect their body image by rejecting unrealistic images of the thin ideal. Similar findings emerged in a study of women exercisers who expressed that self-compassion

helped them to appreciate their bodies the way they were regardless of cultural ideals (Berry, Kowalski, Ferguson, McHugh, 2010). Being connected to other women in sport with similar body image struggles helped the athletes recognize that no one has a perfect body, and that perfection isn't worth striving toward.

6.1.2.2 Intuitive Eating

Women athletes' eating behaviour is vitally important to their physiological and psychological health (Sundgot-Borgen & Torstviet, 2010). Intuitive eating is an adaptive approach to fueling the body that has been linked with less preoccupation with food and making food choices that will enhance the body's functioning (Tylka & Kroon Van Diest, 2013). In this study self-compassion, and the subcomponents self-kindness, mindfulness, and common humanity, were positively connected to intuitive eating for women athletes. However the women athletes felt that self-kindness and mindfulness, more so than common humanity, were the most important components of self-compassion in facilitating intuitive eating.

Self-kindness was positively correlated with intuitive eating in phase one, and the women in phase two also stated that self-kindness was connected to their experiences of intuitive eating. From the perspective of the women athletes in the qualitative phase, self-kindness supported and promoted intuitive eating because being kind toward the self involved making sure the body was fueled properly for sport. Balanced diets help athletes to perform well in sport (The American Dietetic Association, Dietitians of Canada, & American College of Sports Medicine, 2009; Highton, Twist, Lamb, & Nicholas, 2013; Maughan & Shirreffs, 2013). Through intuitive eating women athletes could increase the amount of flexibility and balance in their eating behaviour, in turn their bodies will potentially be more nourished and better equipped to perform in sport.

Another important aspect of self-compassion that can promote intuitive eating for women athletes is mindfulness. Mindfulness may promote intuitive eating because mindfulness can raise awareness regarding motivations (Neff, 2003a). Throughout the qualitative phase of this research, the women athletes described that mindfulness helped them to reduce the amount that they ate for emotional reasons, while promoting reliance on satiation cues, as well as promoting body-food choice congruence. The women talked about how through mindfulness they became aware of times when they were eating out of boredom, when they were over eating, or when they were choosing foods that were not going to help them preform well in sport. The connection

between mindfulness and intuitive eating is important to consider because mindfulness might help the women athletes make decisions about eating habits that promote healthy physiologically based eating behaviours that can help them to perform in sport contexts (e.g., Highton et al., 2013).

6.1.2.3 Intuitive Eating Concerns

There were some concerns raised by the women athletes during the interview phase about how the intuitive eating construct might not be relevant for women athletes. More specifically, several of the athletes expressed concerns about the aspect of intuitive eating that focuses on the reliance on hunger cues. While the women athletes in phase two felt that reliance on satiation cues was well placed and valuable, they discussed several scenarios in which they felt that if they relied on hunger cues to signal that they should eat, that it would negatively impact their training and competition performances. The athletes spoke to a variety of situations in which they needed to eat before they were hungry. If the athletes waited until they were hungry to eat, they would be in the middle of an early morning workout, a practice, or even during a competition, and therefore were unable to eat until they were done their activity. The women went further to say that if they did not plan ahead or eat the right things at the right time they would not be able to train or perform their best.

The women athletes in the qualitative phase suggested that they needed to be aware of what their bodies needed to perform well in sport; that for athletes, scheduled eating is in their best interest, even if the behaviour is ridged or strict. Often times eating when not hungry or on a regimented schedule is considered to be maladaptive (American Psychiatric Association, 2013). In the qualitative phase the athletes however raised an important point that before behaviours are classified as adaptive or maladaptive the motivation behind the behaviour must be considered, especially when it comes to athlete eating behaviours. Shouse and Nilsson (2011) also discussed the importance of awareness in women's intuitive eating behaviour. Although the athletes reported eating behaviours that would be typically classified as maladaptive (eating when not hungry or ridged eating schedules), they stated that they were eating in a way that was intuitive in the sense that their eating behaviour promoted athletic performance and success in both training and competition contexts. Therefore, the women in the qualitative phase are still considered to eat intuitively based on the global construct of intuitive eating because the women

are engaging in physiologically based eating behaviour (Tylka, 2006; Tylka & Kroon Van Diest, 2013).

6.1.3 Discussion of Challenges and Negative Constructs

In my research self-compassion was negatively related to women athletes' sport specific state self-criticism, disordered eating, and compulsive exercise. Self-compassion was found to be significant beyond self-esteem, after controlling for both age and BMI, for lower levels of state self-criticism, overall disordered eating, and overall compulsive exercise. The results from my research are consistent with past research that identifies that self-compassion contributes, beyond self-esteem, on measures of well-being and disturbance for both women athletes and exercisers (e.g., Magnus et al., 2010; Mosewich et al., 2013). Further, self-compassion was also negatively related to and significant beyond self-esteem for all four of the subscales for disordered eating (i.e., restraint, eating concerns, shape concerns, and weight concerns) and two of the three the subscales for compulsive exercise (i.e., weight control exercise and avoidance of negative affect). These results indicate that self-compassion might be a useful tool for women athletes to protect them from self-criticism, disordered eating, and compulsive exercise beyond self-esteem.

6.1.3.1 Self-Criticism

Self-compassion might protect women athletes from harsh self-criticism through the promotion of self-kindness. Self-kindness is presented by Neff (2003a) as the ability and tendency to relate to the self in kind and understanding ways. Self-kindness had the strongest negative correlation (r= .379, p< 0.01; see Appendix F1 for full correlation table) among the positive subcomponents of self-compassion (i.e., self-kindness, mindfulness, and common humanity) with self-criticism. This finding supports the statements made by Neff (2003a) that self-kindness could protect against harsh self-criticism and self-judgment because individuals are more forgiving of shortcomings and failures when they are being self-kind. For women athletes, holding self-compassionate thoughts and beliefs should help lower self-critical thoughts and beliefs that lead some women athletes to engage in disruptive behaviours such as disordered eating and compulsive exercise.

6.1.3.2 Eating Psychopathology

Disordered eating can be a result of many psychosocial influences. One influence that women athletes have expressed in previous research is dissatisfaction with their physical body, whether it is in sport contexts or outside of sport (Fitzsimmons-Craft et al., 2012; Haase et al., 2002; Thompson & Chad, 2002). Self-compassion has held a negative relationship with disordered eating in past research (e.g., Adams & Leary, 2007; Wasylkiw et al., 2012). Women who engage in disordered eating cite that they are judgmental toward themselves and can feel isolated in their discomfort with their bodies (Fitzsimmons-Craft et al., 2012; Mosewich et al., 2011). Self-compassion could protect individuals from engaging in disordered eating because it can provide a buffer against negative thoughts and feeling toward the self (Neff, 2003a), which might have the potential to lessen the discomfort women athletes feel due to the difference between their actual selves and the culturally imposed ideal self. The current study highlights that self-compassion is negatively related to disordered eating and that self-compassion might play a roll beyond self-esteem in protecting women athletes from eating psychopathology.

Self-kindness, mindfulness, and common humanity were correlated with lower levels of eating concerns, shape concerns, and weight concern subscales of the EDE-Q. These eating, shape, and weight concerns are potentially managed through self-compassion, as self-compassion is suggested to protect women from negative feelings about themselves (Neff, 2003a). Self-kindness could be helpful because it should help women athletes feel positive about their bodies and reduce concerns about body shape and weight. Mindfulness could be beneficial because women athletes could become more aware of their thoughts and feelings toward themselves. Self-awareness might be helpful in reducing disordered eating behaviour because women athletes would be more conscious of what their bodies need. Further, self-awareness can promote a healthy perception of the physical body, in turn helping to manage the desire to control the body through maladaptive eating behaviours. Athletes' concerns about eating, shape, and weight may also be managed through the common humanity aspect of self-compassion. Common humanity is considered to be helpful during challenging times because it helps people to see their struggles as connecting to others and as a part of the human experience (Neff, 2003a). Feeling connected to others could lead women athletes to feel that they are not alone. Feeling connected to others might also help to minimize the impact that cultural ideals of beauty have on women athletes eating attitudes and behaviours.

6.1.3.3 Compulsive Exercise

Compulsive exercise is another behaviour, in addition to disordered or restrictive eating, that women athletes turn to in an attempt to control or change their body (Plateau et al., 2014). Compulsive exercise is a unique challenge for women athletes as it can be difficult to recognize the different motivations for exercise, because much of athletes' exercise is expected as part of their sport training and competition (Plateau et al., 2014; Thompson & Sherman, 2010). There is however an important difference between women athletes who exercise as a part of their training or for enjoyment versus women who exercise because they feel guilt or shame when they do not exercise (Plateau et al., 2014). For athletes it is particularly important to exercise and complete training so that they can compete effectively; however, athletes should not feel shame or guilt if they are unable to exercise for valid reasons such as injury. Feeling guilty for missing training when injured may lead an athlete to resume training before they are ready, which could potentially make their injury worse or prolong their recovery (Tietjen-Smith & Mercer, 2008).

The results from the quantitative data show that self-compassion might be a potential tool for women athletes to help reduce compulsive exercise, which is important as compulsive exercise is linked with chronic injury and athlete burnout (Tietjen-Smith & Mercer, 2008). Self-kindness was negatively related to overall compulsive exercise, weight control exercise, and avoidance of negative affect. Self-kindness may be most relevant to reducing the compulsivity of exercise motivations because athletes would be kind and understanding to themselves if they were unable to complete their training/ exercise, as self-kindness promotes self-understanding during challenges (Neff, 2003a). Further, self-kindness could also help women athletes maintain a positive self-perspective, which may reduce relying on completing exercise and training sessions to feel positively toward the self or to reduce negative emotional states.

6.1.4 Discussion of the Female Athlete Triad

Sport contexts can be highly evaluative and outcome oriented (Bartholomew et al., 2011; Lox et al. 2006; Weinberg & Gould, 2011). One challenge women athletes face in sport is avoiding engaging in harsh self-criticism (Mosewish et al., 2014). Although some athlete's express that being critical helps them to succeed in sport (Ferguson et al., 2014; Sutherland et al., 2014), many women also state that self-criticism reduces feelings of worth and can lead to body dissatisfaction (Koyuncu et al., 2010). If women athletes become dissatisfied with aspects of

their bodies they turn to two main resources to help alleviate the dissonance between their current body and the body they desire: disordered eating and compulsive exercise (Cash & Smolak, 2011; Mosewich et al., 2009; Plateau et al., 2014).

When women athletes engage in disordered or restrained eating behaviours, which often results in energy deficiency, they become at risk for what is known as the female athlete triad (Deimel & Dunlap, 2012; Nazem & Ackerman, 2012; Tietjen-Smith & Mercer, 2008). The female athlete triad is a biobehavioural construct that focuses on the outcomes of eating disturbance combined with athletic training (De Souza et al., 2014; Nattiv et al., 2007). Singularly or in combination the components of the triad (energy deficiency, menstrual dysfunction, and low bone density) can lead to a variety of negative physiological outcomes that can hinder an athlete's performance and potentially increase the risk for injury. Amenorrhea (irregular or prolonged absence of menses) and early onset of osteoporosis (low bone density) are two primary factors associated with the female athlete triad. Irregular menses is an observable symptom that is considered a precursor of many of the serious chronic issues that women athletes are exposed to, such as reduced development of bone mineral density, nutritional imbalances, and damage to the reproductive system (Tietjen-Smith & Mercer, 2008).

The women athletes in my study responded to a series of questions during the quantitative phase, identifying the percentage of the sample at potential risk of the female athlete triad and to describe the sample. Women athletes were asked to self-report if they had previously been diagnosed with low energy intake, menstrual dysfunction, and/or low bone density. Based on the results of my research, the current sample of women athletes seems to be different compared to samples from the general population in three ways: age at menarche, rates of irregular menstruation, and rates of weight control (Deimel & Dunlap, 2012; Martinsen & Sundgot-Borgen, 2013; Slap, 2003; Sundgot-Borgen & Trostviet, 2010; Tomlinson & Morgan, 2013). The mean age at menarche in the current sample was 13.25 years, which is higher than is typical for a general population of women (M=12.45 years; Chumlea et al., 2003; Nattiv et al., 2007). Primary amenorrhea[16] is rare in the general population (1%), however is more common in women athlete samples (Nattiv et al., 2007). Rates of irregular menstruation in the current sample (16.67%) were also higher than women in the general population (2-5%), however not as

[16] Primary amenorrhea is the delay in the age of menarche and the defining age is 15 years (Nattiv et al., 2007).

high as some small athlete samples that reported as high as 65-69% in long distance runners and dancers respectively (Nattiv et al., 2007). The current sample is comparable to other samples of women and female athletes for rates of menstrual irregularity, and rates of weight control; while being different from other samples of athletes by having lower self-reported rates of diagnosed low BMD, younger age of menarche (other sample report age at menarche as 14 years and higher; e.g., Duckham et al., 2012), and fewer athletes identifying as having low energy intake (Cobb et al., 2003; Deimel & Dunlap, 2012; Plateau et al., 2014; Sundgot-Borgen & Trostviet, 2010). These differences between this athletic sample and others may be due to the self-report data used; bone scans and medical history were not obtained for participants. Therefore, low BMD and energy intake may be under represented because the women were not tested in this study using more objective instruments. Further, bone scans are not consistently conducted for young women athletes (De Souza et al., 2014); inconsistent scanning could lead to under representation of low BMD states for athletes. The current sample contains a range of participation levels and hours and sessions per week, which might have impacted age of menarche (Nattiv et al., 2007). It is possible that the current sample is different from other samples of women athletes because the current sample included women from a variety of sports and competition levels, whereas other samples have focused on elite lean and aesthetic sport athletes (e.g., Duckham et al., 2012).

6.2 STRENGTHS

6.2.1 Adding to the Literature

My research contributes to three bodies of literature: the self-compassion literature, literature on women athletes, and literature focused on body image and eating psychopathology. This research is also adding to the literature by confirming what other research has shown (e.g., Mosewich et al., 2013) and highlighting the importance of considering self-compassion, body appreciation, intuitive eating, disordered eating, compulsive exercise, and state self-criticism together. My project has confirmed and uncovered relationships between self-compassion and measures of well-being such as self-esteem, body appreciation, intuitive eating, disordered eating, compulsive exercise, and self-criticism in an athletic population; the quantitative phase confirmed that self-compassion contributes significant unique variance beyond self-esteem for a variety of well-being variables such as body appreciation, disordered eating, while contributing

novel findings that self-compassion contributes unique variance beyond self-esteem in women athletes' intuitive eating, compulsive exercise, and self-criticism.

6.2.2 Implementation of Athlete Specific Measures

An important aspect of this research study is the implementation of athlete specific measures for compulsive exercise (CET-AV; Plateau et al., 2014) and state self-criticism (SC-AV; Mosewich et al., 2013). This is an important step forward as the athletic and general women populations have very different concerns. There is a potential that items on general population measures may not be salient for athletes, and in turn not accurately measuring what the scale is intending to measure. The women athletes in the qualitative phase expressed situations in which the general intuitive eating construct might not be fully relevant for athletes, which highlights the importance of including athlete specific measures in research. Therefore, this research has highlighted the importance for administering athlete specific measures, with athlete populations, to strengthen research conclusions.

6.2.3 Mixed Methods Design

The use of mixed methods designs helps to gain a richer view of topics being studied (Creswell & Plano Clark, 2011). This is an important aspect of the current research project because there is limited mixed methods research regarding women athletes' self-compassion; the only research to my knowledge that has studied self-compassion in a women athlete population with mixed methods is the research by Ferguson et al. (2014). In my research the qualitative data was able to highlight and confirm aspects from the quantitative data that adds depth to the conclusions made. This research helps to fill a gap in the literature through the implementation of mixed methods and the examination of constructs that are particularly important for women athletes related to eating attitudes and body image. Further, when looking at the quantitative and qualitative data together, a well-rounded picture emerges; showing that self-compassion, quantitatively and from the perspective of women athletes, plays a role in women athletes' body appreciation and intuitive eating.

The current research has also attempted to represent mixed methods through the application of newly proposed writing style and structure (Creswell & Plano Clark, 2011). Creswell and Plano Clark (2011) suggested that to best represent mixed methods designs moving

away from traditional scientific writing can be beneficial in adding depth and clarity to written documents, such as research proposals, thesis and dissertation documents, and journal articles.

6.2.4 Building a Positive Foundation for Future Research

The current study has followed the suggestions of other researchers to further explore positive psychological constructs and constructs informed by positive psychology (e.g., Cash & Smolak, 2011). My research has broadened the scope of the study of self-compassion and measures of well-being in a women athlete population. This research applies constructs informed by positive psychology and begins to bring balance to the study of women athletes' self-compassion. This research is valuable to Positive psychological theory because it highlights and adds depth to the understanding of the positive nutrition component of positive psychology represented in the mind map in Hefferon and Boniwell (2011). Understanding the challenges and the strengths of sport participation for women athletes is a critical step towards being able to manage and reduce the challenges related to body image and eating attitudes and behaviours for women athletes, while promoting body appreciation and intuitive eating experiences for women in sport.

6.3 IMPLICATIONS OF CONCLUSIONS

The conclusions from my research provide support for other studies that have stated that self-compassion may be a useful tool, beyond self-esteem, to buffer women athletes against negative experiences in sport (e.g., Mosewich et al., 2013; Mosewich et al., 2011). The quantitative and qualitative data gathered also suggest that self-compassion may also be a useful tool beyond self-esteem for women athletes to promote positive experiences of body image and eating. The next step in this research area is the implementation of experimental designs that can assess the clinical relevance of self-compassion for women athletes.

Further, the findings from this research suggest that there are aspects of well-being specifically for women athletes that could be added to the conceptual model of positive psychology (Hefferon & Boniwell, 2011). As the study of positive psychology grows, it is vital to incorporate and refine the positive psychology mind map presented by Hefferon and Boniwell (2011) to include aspects from research that are not currently classified as a part of positive psychology. The findings from my research could be added to the positive subjective experience

category of positive psychology, as the findings highlight sport specific experiences related to positive nutrition, exercise, peak experiences, positive emotions, and constructive emotions.

6.4 PRACTICAL APPLICATION

The current research and findings are not experimental and therefore cannot make causal claims (Field, 2008; Tabachnick & Fidell, 2007; Vincent & Weir, 2012). However, with further study if these relationships hold true, in experimental and longitudinal research, then the results could be useful in the development of workshops for coaching staff. These developmental workshops could help coaches further understand challenges that women athletes face in sport contexts, how self-compassion training for athletes may be a useful buffer against negative feelings toward the self in a variety of challenging situations, and promote positive body image and eating behaviours in training and competition settings. There is initial support that a self-compassion intervention can reduce state self-criticism in self-critical women athletes (Mosewich et al., 2013). Moving forward it is important to confirm the findings from the Mosewich et al. (2013) study as well as begin to explore if the self-compassion intervention would have in impact on other measures of disorder and well-being.

6.5 LIMITATIONS

There are four main limitations of the current research project. First and foremost, my research conclusions are limited because the design is not experimental. As my research is cross sectional the data cannot make causal claims or infer directionality of which constructs contribute to others. The second limitation of this research study was participant recruitment. The recruitment policies at the University of Saskatchewan are strict related to accessing face time with varsity athletes in that researchers are not permitted to directly contact coaches. As a result of this policy, during this research no coaches contacted me for further information or provided an opportunity for me to come and speak with their team.

The third limitation of my current research is the use of a number of general population measures. There is the possibility that measures that have been validated and developed for the general population are not valid for athlete specific research. My sample is specific to only one segment of the general population; therefore, the range of possible responses may be restricted, which leads to the potential for non-normal distributions of data and dulled precision.

My research was also limited because of the online format presented to participants. Because the questionnaires were prepared and presented in an online format the measures were organized in the same order for all participants. A challenge with collecting data from multiple scales is that there is the potential for carry over effects from one scale to the next. The positive scales were presented first as they are directly related to the research question, which protected the participant responses from negative carry over effects. However, because of the ordering of scales there is the possibility that a positive carry over effect impacted participant responses particularly to the pathological scales (EDE-Q, CET-AV, and SC-AV).

6.6 FUTURE DIRECTIONS

6.6.1 Advanced Research Designs

When researching women athletes' self-compassion the next step in research is likely to use more advanced research designs such as longitudinal and intervention designs. There are many descriptive self-compassion studies that have considered several well-being and disturbance measures (e.g., Neff, 2011; Raes, 2010). Recently Mosewich et al. (2013) published an intervention study that holds positive initial results regarding the role of self-compassion, and the potential for intervention, in women athletes' self-criticism. It is prudent based on the findings from my current study to now consider the usefulness of the self-compassion intervention related to other measures of disturbance (e.g., body dissatisfaction, perfectionism, compulsive exercise, disordered eating) and well-being (e.g., body appreciation and intuitive eating) for women athletes.

6.6.2 Further Exploration of the Role of Self-compassion in Women Athletes' Positive Body Image and Eating

Continuing to explore the role of self-compassion and constructs informed by positive psychology in women an athlete population is an important research direction. Continuing to study the role of self-compassion in women athletes' positive body image and eating experiences would be helpful to determine how self-compassion could be a positive tool for women athletes during challenging sport experiences, while at the same time promoting positive experiences. Building on the current research, it might be particularly relevant to explore the role that self-

compassion plays in women athletes' body competence, how self-compassion plays a role in promoting women athletes' body appreciation, and how self-compassion may help women athletes reject unrealistic cultural ideals of beauty. Further, it is important to explore other positive constructs of eating behaviour, such as mindful eating (Framson et al., 2009), alongside self-compassion. Having a better understanding of the role of self-compassion in women athletes' positive body image and eating would provide insight into the study of women athletes' self-compassion, and begin to build a strong body of knowledge related to the importance of self-compassion in fostering positive sport experiences for women athletes.

6.6.3 Athletic Intuitive Eating

The women in phase two challenged the intuitive eating construct and suggested that adaptive eating behaviour is different for athletes than for non-athletes. A future direction that emerged from the qualitative data might be to further develop a better understanding of how adaptive athletic eating is different than adaptive eating behaviours in the general population, as a way to show how women athletes eating behaviour might be unique. Exploratory research that considers adaptive constructs of eating such as intuitive eating and mindful eating, would be particularly helpful to formulate what adaptive athletic intuitive eating looks like for women athletes. This future research should also take into consideration the motivations behind women athletes' eating attitudes and behaviour, and the potential role of self-compassion in those motivations. However, this direction might require the development and validation of an athlete specific measure of intuitive eating or the development and validation of a different measure to assess adaptive physiologically based eating for athletes.

6.6.4 Modification of Current Measures for Athlete Populations

The final future direction to discuss is the potential to re-tool and design measures relevant to athletes' self-compassion, body image, and eating. Furr and Bacharach (2014) stated that, "If something is not measured or is not measured well, then it cannot be studied with any scientific validity." (p.3). This is an exciting future direction because the women athletes in the qualitative phase of my research suggested that there were aspects of intuitive eating that did not resonate with them or represent what adaptive eating is for athletes. It follows that there is the potential that the other general population scales might not be appropriate for athletic research. The measures and scales could be modified by increasing the range of responses, re-wording

items to be athlete specific, and to adapt measures to represent the uniqueness of the athletic experience.

6.7 SUMMARY

My research helps to illustrate the role that self-compassion has in body appreciation, intuitive eating behaviour, disordered eating, compulsive exercise, and self-criticism for women athletes. The two phases of this research furthers the study of self-compassion in the sport specific contexts. It also begins to form bridges among the literatures of three different psychological constructs – self-compassion, body appreciation, and intuitive eating – related to positive sport participation for women, while also exploring the potential role of self-compassion in challenges athletes face related to disordered eating, compulsive exercise, and self-criticism. However, through the exploration of the role of self-compassion in positive experiences of body appreciation and intuitive eating in particular, we have started to understand how to promote these positive experiences – and not just relieve the potential negative or challenging experiences associated with the sport context.

This research adds to the self-compassion literature by providing greater depth of understanding to how self-compassion contributes to positive sport experiences for women athletes. This knowledge further justifies the development and promotion of self-compassion both as a tool and an intervention to heighten well-being for women athletes. Further, through a better understanding of the role self-compassion plays in women athletes' body appreciation and intuitive eating experiences in sport, we can begin to encourage sport participation for women. Finally, this research sheds light on how self-compassion might be applied to improve women athletes' body appreciation and intuitive eating, while reducing disordered eating, compulsive exercise, and self-critical thoughts and emotions. I recognize that my research is not experimental; however, my findings suggest that it might be possible that through the promotion of self-compassion, women may be able to experience the advantages associated with sport participation.

This study has highlighted some key ways that self-compassion helps women athletes to manage challenging situations in sport and how self-compassion promotes positive sport experiences, which could be useful for intervention strategies in future research. Both phases support conclusions from past research that self-compassion may be a useful tool for women

athletes during challenging times. Finally, this study has found initial novel results that self-compassion may be a useful tool for women athletes to enhance their positive sport experiences through the promotion of body appreciation and intuitive eating.

REFERENCES

Adams, C. E., & Leary, M. R. (2007). Promoting self-compassionate attitudes toward eating among restrictive and guilty eaters. *Journal of Social and Clinical Psychology, 26*, 1120-1144.

American Dietetic Association, Dietitians of Canada, & American College of Sports Medicine. (2009). Nutrition and athletic performance. *Medicine & Science in Sports & Exercise, Special Communications*, 709-731. Doi: 10.1249/MSS.0b013e318190eb86

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Augustus-Horvath, C. L., & Tylka, T. L. (2011). The acceptance model of intuitive eating: A comparison of women in emerging adulthood, early adulthood, and middle adulthood. *Journal of Counseling Psychology, 58*, 110-125. DOI: 10.37/a0022129

Avalos, L. C., & Tylka, T. L. (2006). Exploring a model of intuitive eating with college women. *Journal of Counseling Psychology, 53*, 486-497. DOI: 10.1037/0022-0167.53.4.486

Avalos, L., Tylka, T. L., & Wood-Barcalow, N. (2005). The body appreciation scale: Development and psychometric evaluation. *Body Image, 2,* 285-297. DOI: 10.1016/j.boduim.2005.06.002

Bardone-Cone, A. M., & Agras, W. S. (2007). Psychometric properties of eating disorder instruments in black and white young women: Internal consistency, temporal stability, and validity. *Psychological Assessment, 19*, 356-362.

Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., & Thøgersen-Ntoumani, C. (2011). Psychological need thwarting in the sport context: Assessing the darker side of athletic experience. *Journal of Sport & Exercise Psychology, 33*, 75-102.

Berg, K. C., Peterson, C. B., Frazier, P., & Crow, S. J. (2012). Psychometric evaluation of the eating disorder examination questionnaire: A systematic review of the literature. *International Journal of Eating Disorders, 45*, 428-238.

Berry, K. A., Kowalski, K. C., Ferguson, L. J., & McHugh, T. F. (2010). An empirical phenomenology of young adult women exercisers' body self-compassion. *Qualitative Research in Sport and Exercise, 2,* 293-312. DOI: 10.1080/19398441.2010.517035

Besenski, L. (2009). *Health-enhancing physical activity and eudaimonic well-being*. (Master's Thesis). Retrieved from University of Saskatchewan Thesis Database.

Cash, T. F., & Smolak, L. (2011). *Body image: A handbook of science, practice, and prevention* (2nd ed.). New York, NY: The Guilford Press.

Choi, H., Meininger, J. C., & Roberts, R. E. (2006). Mental differences in adolescents' mental distress, social stress, and resources. *Adolescence, 41*, 263-283.

Chumlea, W., C., Schubert, C. M., Roche, A. F., Kulin, H.E., Lee, P. A., Himes, J. H., & Sun, S. S. (2003). Age at menarche and racial comparisons in US girls. *Pediatrics, 111*, 110-113. Doi: 10.1542/peds.111.1.110

Cobb, K. L., Bachrach, L. K., Greendale, G., Marcus, R., Neer, R. M., Nieves, J., et al. (2003). Disordered eating, menstrual irregularity, and bone mineral density in femal runners. *Medicine & Science in Sport & Exercise, 35*, 711-719. Doi: 10.1249/01.MMS.0000064935.68277.E7

Cohen, J. (1992). A power primer. *Psychological Bulletin, 1,* 155-159.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.

Crocker, P. R. E. (2011). *Sport and exercise psychology: A Canadian perspective* (2nd ed.). Toronto, ON: Pearson Canada Inc.

Davis, L. J., (2008). *Obsession: A history*. Chicago, IL: University of Chicago Press.

De Bruin, A. P., Oudejans, R. R. D., & Bakker, F. C. (2007). Dieting and body image in aesthetic sports: A comparison of Dutch female gymnasts and non-aesthetic sport participants. *Psychology of Sport and Exercise, 8*, 507-520. DOI: 10.1016/j/psychsport.2006.10.002.

De Souza, M. J., Nattiv, A., Joy, E., Misra, M., Williams, N. I., Mallinson, R. J., Gibbs, J. C., Olmsted, M., Goolsby, M., & Matheson, G. (2014). 2014 female athlete triad coalition consensus statement on treatment and return toplay of the female athlete triad. *Brittish Journal of Sports Medicine, 48*, 1-20. Doi: 10.1136/bjsports-2013-093218

Deimel, J. F., & Dunlap, B. J. (2012). The female athlete triad. *Clinical Sports Medicine, 31*, 247-254. DOI: 10.1016/j.csm.2011.09.007

Del Balso, M., & Lewis, A. D. (2008). *First steps: A guide to social research* (4th ed.). Toronto, ON: Nelson Education.

Downs, D. S., DiNallo, J.M., & Kirner, T. L. (2008). Determinants of pregnancy and postpartum depression: Prospective influences of depressive symptoms, body image satisfaction, and exercise behavior. *Annals of Behavioural Medicine, 36*, 54-63. Doi:10.1007/s12160-008-9044-9

Duckham, R. L., Peirce, N., Meyer, C., Summers, G. D., Cameron, N., & Brooke-Wavell, K. (2012). Risk factors for stress fracture in female endurance athletes: A cross-sectional study. *BMJ Open, 2*, 1-7. DOI: 10.1136/bmjopen-2012-001920.

Dunkley, D. M., & Grilo, C. M. (2007). Self-criticism, low self-esteem, depressive symptoms, and over-evaluation of shape and weight in binge eating disorder patients. *Behavioural Research and Therapy, 45*, 139-149. DOI: 10.1016/j.brat.2006.01.017

Evans, M. B., Eys, M. A., & Bruner, M. W. (2012). Seeing the "we" in "me" sports: The need to consider individual sport team environments. *Canadian Psychology, 53*, 301-308. DOI: 10.1037/a(x)30202

Fairburn C. G. & Beglin S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders, 16*(4), 363-370.

Ferguson, L. J. (2014). *The role of self-compassion in young women athletes' eudaimonic well-being* (Doctoral Dissertation). University of Saskatchewan Thesis Database.

Ferguson, L. J., Kowalski, K. C., Mack, D. E., & Sabiston, C. M. (2014). Exploring self-compassion and eudaimonic well-being in young women athletes. *Journal of Sport & Exercise Psychology, 36*, 203-216. Doi: 10.1123/jsep.2013.0096

Ferreira, C., Pinto-Gouveia, J., & Duarte, C. (2013). Self-compassion in the face of shame and body image dissatisfaction: Implications for eating disorders. *Eating Behaviours,* http://dx.doi.org/10.1016/j.eatbeh.2013.01.005

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: Sage.

Fitzsimmons-Craft, E., Harney, M. B., Brownstone, L. M., Higgins, M. K., & Bardone-Cone, A. M. (2012). Examining social physique anxiety and disordered eating in college women. The roles of social comparison and body surveillance. *Appetite, 59*, 796-805.

Forcier, K., Stroud, L. R., Papanaonatos, G. D., Hitsman, B., Reiches, M., Krishnamoorthy, J., Niaura, R. (2006). Links between physical fitness and cardiovascular reactivity and recovery to psychological stressors: A meta-analysis. *Health Psychology, 25*, 723-739.

Framson, C., Kristal, A. R., Schenk, J. M., Littman, A. J., Zeliadt, S., & Benitez, D. (2009). Development and validation of the mindful eating questionnaire. *Journal of the American Dietetic Association, 109*, 1439-1444. Doi: 10.1016/j.jada.2009.05.006

Furr, M. R., & Bacharach, V. R. (2014). *Psychometrics: An introduction*. Thousand Oaks, CA: Sage.

Gallagher, S., & Shear, J. (Eds.). (1999). *Models of the self*. Thorverton, UK: Imprint Academic.

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy, 13*, 353-379. Doi: 10.1891/jcop.20.2.183

Guba, E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal, 29*, 75–91.

Haase, A. M., Prapavessis, H., & Owens, R. G. (2013). Domain-specifity in perfectionism: Variations across domains of life. *Personality and Individual Differences, 55*, 711-715. DOI: 10.1016/j.paid.2013.05.025

Haase, A. M., Prapavessis, H., & Owens, R. G. (2002). Perfectionism, social physique anxiety and disordered eating: A comparison of male and female elite athletes. *Psychology of Sport and Exercise, 3*, 209-222.

Hausenblas, H. A., & Carron, A. V. (2000). Group influences on eating and dieting behaviors in male and female varsity athletes. *Journal of Sport Behavior, 23*, 33-41.

Hausenblas, H. A., & Fallon, E. A. (2006). Exercise and body image: A meta-analysis. *Psychology and Health, 21*, 33-47. DOI: 10.1080/14768320500105270

Hefferon, K., & Boniwell, I. (2011). *Positive psychology: Theory, research and applications*. New York, NY: McGraw-Hill: Open University Press.

Hesse-Biber, S. N., & Leavy, P. (2004). *Approaches to qualitative research: A reader on theory and practice*. New York, NY; Oxford University Press.

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology, 60*, 456-470.

Highton, J., Twist, C., Lamb, K., & Nicholas, C. (2013). Carbohydrate-protein coingestion improves multiple-sprint running performance. *Journal of Sports Sciences,31*, 361-369. Doi: 10.1080/02640414.2012.735370

Kowalski, K., & Duckham, R. (2014). Self-criticism. In R. C. Eklund & G. Tennenbaum (Eds.), *Encyclopedia of Sport and Exercise Psychology* (pp. 628-629). Thousand Oaks, CA: Sage.

Koyuncu, M., Tok, S., Canpolat, M. A., & Catikkas, F. (2010). Body image satisfaction and dissatisfaction, social physique anxiety, self-esteem, and body fat ratio in female exercisers and nonexercisers. *Social Behaviour and Personality, 38*, 561-570. DOI: 10.2224/sbp.2010.38.4.561

Krcmar, M., Giles, S., & Helme, D. (2008). Understanding the process: How mediated peer norms affect young women's body esteem. *Communication Quarterly, 56*, 111-130. DOI: 10.1080/01463370802031844

Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology, 35*, 1268-1282.

Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92*, 887-904. DOI: 10.1037/0022-3514.92.5.887

Levine, M. P., & Piran, N. (2004). The role of body image in the prevention of eating disorders. *Body Image, 1*, 57-70. Doi:10.1016/s1740-1445(03)000006-8

Lox, C. L., Martin Ginis, K. A., & Petruzzello, S. J. (2006). *The psychology of exercise: Integrating theory and practice* (2nd ed.). Scottsdale, AZ: Holcomb Hathaway.

Luce, K. H., & Crowther, J. H. (1999). The reliability of the eating disorder examination - self-report questionnaire version (EDE-Q). *International Journal of Eating Disorders, 25*, 349-351.

Magnus, C. M., Kowalski, K. C., & McHugh, T-L. F. (2010). The role of self-compassion in women's self-determined motives to exercise and exercise-related outcomes. *Self and Identity, 9*, 363-382. Doi: 10.1080/15298860903135073

Martin-Albo, J., Nunez, J. L., Navarro, J. G., & Grijalvo, F. (2007). The Rosenberg self-esteem

scale: Translation and validation in university students. *The Spanish Journal of Psychology, 10*, 458-467.

Martinsen, M., & Sundgot-Borgen, J. (2013). Higher prevalence of eating disorders among adolescent elite athletes than controls. *Medicine & Science in Sports & Exercise, 45*, 1188-1197. Doi: 10.1249/MSS.0b013e318281a939

Marsh, H. W. (1998). Age and gender effects in physical self-concepts for adolescent elite athletes and nonathletes: A multicohort-multioccasion design. *Journal of Sport & Exercise Psychology, 20*, 237-259.

Maughan, R. J., & Shirreffs, S. M. (2013). *Food, nutrition and sport performance III*. New York, NY: Taylor & Francis Books.

McArdle, W. D., Katch, F. I., & Katch, V. L. (2010). *Exercise physiology: Nutrition, energy, and human performance* (7th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Mond, J. M., Hay, P. J., Rodgers, B., & Owen, C. (2006). Eating disorder examination questionnaire (EDE-Q): Norms for young adult women. *Behaviour Research and Therapy, 44*, 53-62. DOI: 10.1016/j.brat.2004.12.003

Mond, J. M., Hay, P. J., Rodgers, B., Owen, C., & Beumont, P. J. V. (2004). Temporal stability of the eating disorder examination questionnaire. *International Journal of Eating Disorders, 36*, 195-203

Morrow, D., & Wamsley, K. B. (2010). *Sport in Canada: A history* (2nd ed.). Oxford University Press.

Mosewich, A. D. (2008). *Young women athletes' self-conscious emotions and self-compassion* (Master's Thesis). University of Saskatchewan Thesis Database.

Mosewich, A. D., Crocker, P. R. E., Kowalski, K. C., & DeLongis, A. (2013). Applying self-compassion in sport: An intervention with women athletes. *Journal of Sport and Exercise Psychology*, #, page range.

Mosewich, A. D., Kowalski, K. C., Sabiston, C. M., Sedgwick, W. A., & Tracy, J. L. (2011). Self-compassion: A potential resource for young women athletes. *Journal of Sport & Exercise Psychology, 33*, 103-123.

Mosewich, A. D., Vangool, A. B., Kowalski, K. C., & McHugh, T.-L. F (2009). Exploring women track and field athletes' meanings of muscularity. *Journal of Applied Sport Psychology, 21*, 99-115.

Myers, D. G. (2008). *Exploring psychology* (7th ed.). New York, NY: Worth Publishers.

Nattiv, A., Loucks, A. B., Manore, M. M., Sanborn, C. F., Sundgot-Borgen, J., & Warren, M. P. (2007). The female athlete triad. *Medicine & Science in Sports & Exercise,* Special Communications, 1867-1882. Doi: 10.1249/mss.0b013e318149fl11

Nazem, T. G., & Ackerman, K. E. (2012). The female athlete triad. *Sports Health: A Multidisciplinary Approach, 4*, 302-311. Doi: 10.1177/1941738112439685

Neff, K. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2,* 85-101. DOI: 10.1080/15298860390129863

Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity, 2,* 223- 250. DOI: 10.1080/15298860390209035

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Psychology Compass, 5*, 1-12. DOI: 10.1111/j.1751-9004-2010.00330.x

Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007a). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*, 139-154. DOI: 10.1016/j.jrp.2006.03.004

Neff, K.D., Rude, S. S., & Kirkpatrick, K. L. (2007b). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*, 908-916. DOI: 10.1016/j.jrp.2006.08.002

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality, 77*, 23-50. DOI: 10.1111/j.1467-6494.2008.00537.x

Nepon, T., Flett, G. L., Hewitt., & Molnar, D. S. (2011). Perfectionism, negative social feedback, and interpersonal rumination in depression and social anxiety. *Canadian Journal of Behavioural Science, 43*(4), 297-308.

Nichols, S. J., Sanborn, C. F., & Essery, E. V. (2007). Bone density and young athletic women. *Sports Medicine, 37*, 1001-1014.

Perterson, C. B., Crosby, R. D., Wonderlich, S. A., Joiner, T., Crow, S. J., Mitchell, J. E., et al. (2007). Psychometric properties of the eating disorder examination-questionnaire: Factor structure and internal consistency. *International Journal of Eating Disorders, 40*, 386-389.

Plateau, C.R., Shanmugam, V., Duckham. R.L., Goodwin, H., Jowett, S., Brooke-Wavell,

K.S.F., Laybourne, A., Arcelus, J., & Meyer, C. (2014). Use of the Compulsive Exercise Test with athletes: Norms and links with eating psychopathology. *Journal of Applied Sport Psychology*. Doi: 10.1080/10413200.2013.867911.

Powers, T. A., Zuroff, D. C., & Topciu, R. A. (2004). Covert and overt expressions of self-criticism and perfectionism and their relation to depression. *European Journal of Personality, 18*, 61-72. DOI: 10.1002/per.499

Raes, D. L., Grilo, C. M., & Masheb, R. M. (2006). Reliability of the eating disorder examination-questionnaire in patients with binge eating disorder. *Behavioural Research Therapy, 44*, 43-51.

Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences, 48,* 757-761. DOI: 10.1016/j.paid.2010.01.023

Reis, N. (2013). *Self-compassion: A potential buffer to difficult experiences in sport for young female athletes'* (Master's Thesis). University of Saskatchewan Thesis Database.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rossiter, E. M., Agras, W. S., Telch, C. F., & Bruce, B. (1992). The eating patterns of non-purging bulimic subjects. *International Journal of Eating Disorders, 11*, 111-120.

Sassaroli, S., & Ruggiero, G. M. (2005). The role of stress in the association between low self-esteem, perfectionism, and worry, and eating disorders. *International Journal of Eating Disorders, 37*, 135-141.

Saumure, K., & Given, L. M. (2008). Data saturation. *The SAGE Encyclopedia of Qualitative Research Methods*. Doi: doi.org/10.4135/9781412963909.n99

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*, 63-75.

Sherry, S. B., Hewitt, P. L., Flett, G. L., Lee-Baggley, D. L., & Hall, P. A. (2007). Trait perfectionism and perfectionistic self-presentation in personality pathology. *Personality and Individual Differences, 42,* 477-490.

Shouse, S. H., & Nilsson, J. (2011). Self-silencing, emotional awareness, and eating behaviors in college women. *Psychology of Women Quarterly, 35*, 451-457. DOI: 10.1177/0361684310388785

Slap, G. B. (2003). Menstrual disorders in adolescence. *Best Practice & Research Clinical Obstetrics & Gynaecology, 17*, 75-92. DOI: 10.1053/ybeog.2003.0342

Steinfeldt, J. A., Zakrajsek, R., Carter, H., & Steinfeldt, M. C. (2011). Conformity to gender norms among female student-athletes: Implications for body image. *Psychology of Men and Masculinity, 12*, 401-416.

Stice, E., & Shaw, H. E. (2002). Role of body dissatisfaction in the onset and maintenance of eating pathology: A synthesis of research findings. *Journal of Psychosomatic Research, 53*, 985-993.

Sundgot-Borgen, J., & Torstveit, M. K. (2010). Aspects of disordered eating continuum in elite high-intensity sports. *Scandinavian Journal of Medicine & Science in Sports, 20*, 112-121. DOI: 10.1111/j.600-0838.2010.01190.x

Sutherland, L. M., Kowalski, K. C., Ferguson, L. J., Sabiston, C. M., Sedgwick, W. A., & Crocker, P. R. E. (2014). Narratives of young women athletes' experiences of emotional pain and self-compassion. *Qualitative Research in Sport, Exercise and Health*. Doi: 10.1080/2159676X.2014.888587

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Pearson Education, Inc.

Taranis, L., Touyz, S., & Meyer, C. (2011). Disordered eating and exercise: Development and preliminary validation of the compulsive exercise test (CET). *European Eating Disorders Review, 19*, 256-268. DOI: 10.1002/erv.1108

Thomas, J. R., Nelson, J. K., & Silverman, S.J. (2005). *Research methods in physical activity* (5thEd.). Champaign, IL: Human Kinetics.

Thompson, R. A., & Sherman, R. T. (2010). *Eating disorders in sport*. New York, NY: Routledge.

Tietjen-Smith, T., & Mercer, J. (2008). The female athlete triad: A statement of the problem. *Journal of Sports & Recreation, 2*, 1-6.

Tomlinson, D., & Morgan, S. L. (2013). Eating disorders and bone. *Journal of Clinical Densitometry: Assessment & Management of Musculoskeletal Health, 16*, 432-438. Doi: 10.1016/j.jocd.2013.08.015

Tylka, T. L. (2006). Development and psychometric evaluation of a measure of intuitive eating. *Journal of Counseling Psychology, 53*, 226-240. DOI: 10.1037/0022-0167.53.2.226

Tylka, T. L., & Kroon Van Diest, A. (2013). The intuitive eating scale-2: Item refinement and psychometric evaluation with college women and men. *Journal of Counseling Psychology, 60*, 137-153.

Tylka, T. L., & Wilcox, J. A. (2006). Are intuitive eating and eating disorder symptomology opposite poles of the same construct? *Journal of Counseling Psychology, 53*, 474-485. DOI: 10.1037/0022-0167.53.4.474

Vincent, W. J., & Weir, J. P. (2012). *Statistics in kinesiology* (4th ed.). Champaign, IL: Human Kinetics.

Wasylkiw, L., MacKinnon, A. L., & MacLellan, A. M. (2012). Exploring the link between self-compassion and body image in university women. *Body Image, 9,* 236-245.

Weinberg, R. S., & Gould, D. (2011). *Foundations of sport and exercise psychology* (5th ed.). Champaign, IL: Human Kinetics.

Wood-Barcalow, N. L., Tylka, T. L., & Augustus-Horvath, C. L. (2010). "But I like my body": Positive body image characteristics and a holistic model for young-adult women. *Body Image, 7*, 106-116.

Zimbardo, P. (2007). *The Lucifer effect: understanding how good people turn evil*. New York, NY: Random House, Inc.

APPENDICES

Appendix A: Phase One Measurements

Appendix A1: Demographic Survey

Information Questionnaire

The aim of this questionnaire is for the investigator to collect information regarding your demographics, history of your weight, menstrual cycle, health and nutrition, and sports training. We ask that you fill this questionnaire in with as much accuracy as possible. If you have any questions please do not hesitate to ask the investigator.

Section 1: Demographic Information

1. What is your age? _____ yrs _____months

2. What is your Nationality? _____

3. Is English your first language? **YES** ◯ **NO** ◯

4. How would you describe yourself? You may select more than one or specify, if applicable.

Aboriginal	◯
Arab	◯
Black	◯
Chinese	◯
Filipino	◯
Japanese	◯
Latin American	◯
South Asian *(e.g., East Indian, Pakistani etc.)*	◯
Southeast Asian *(e.g., Vietnamese, Cambodian etc.)*	◯
West Asian *(e.g., Iranian, Afghan etc.)*	◯
White	◯
Other (please Specify) _____	◯

Section 2: Current and History of Weight and Height

5. What is your current estimated height? _____ cm **or** _____ feet/inches

6. What is your current estimated weight? _____ kg **or** _____ lbs

7. What is or do you have an ideal weight you strive to obtain?

_____ kg or _____ lbs N/A ◯

8. If you have an ideal weight when were you last at this weight?
_____ **Years** _____ **Months**

9. For your primary sport on a scale from 1 to 10 please rate the level of focus of your sport on aesthetic (looking beautiful or being lean)

Non-Aesthetic **Aesthetic**

1 5 10

10. Do you control your weight during your competitive season? **YES** ◯ **NO** ◯

11. Do you control your weight during your off season? **YES** ◯ **NO** ◯

Section 3: Medical History

12. Have you ever been diagnosed with or treated for any of the following (please check all that apply)

Low Bone Density	◯
Menstrual Irregularities	◯
Deficient / Low Energy Intake	◯
None of the Above	◯

Section 4: Current and History of Menstrual Cycle

13. How old were you when you had your first menstrual period? (please complete years and months) _____ **YEARS** _____ **MONTHS**

14. How frequent is your current menstrual period? (times per year)

0 to 3 times per year	◯
4 to 6 times per year	◯
7 to 9 times per year	◯
≥10 ten times per year	◯

(Questions a, b, and c will only appear for participants who indicate fewer than 10 menstrual periods per year)

If fewer than 10 menstrual periods per year please complete (a), (b), and (c).

a. Are you currently taking hormonal and /or oral contraception?

YES ◯ **NO** ◯

b. Have you ever had a period of time when you had no menstrual bleed for more than 3 months?

YES ◯ **NO** ◯

c. Please complete the table below indicating your menstrual status at specific age categories.

	Menstrual Status (average cycles per year		
Age	**Regular (≥ 10)**	**Oligomenorrheic (4-9)**	**Amenorrheic (0-3)**
10 – 15 years			
16 -20 years			
21 -25 Years			
26 – 30 years			
31 – 36 years			

Section 5: Sports Participation and Training History

15. What is the primary sport you are participating in as an athlete?

Ice Hockey	◯
Track and Field	◯
Rowing	◯
Wrestling	◯
Basketball	◯
Gymnastics	◯
Soccer	◯
Football	◯
Golf	◯
Swimming	◯
Field Hockey	◯
Cross-Country Running	◯
Rugby	◯
Tennis	◯

Swimming	◯
Downhill Skiing	◯
Other (please specify) _____	◯

16. How old were you when you began training for your primary sport?

_____ **YEARS** _____ **MONTHS**

17. For your primary sport what is your position/event /discipline (e.g. 800m, shot put, mid fielder)?

_____
_____

18. Do you currently have a coach for your primary sport? **YES** ◯ **NO** ◯

19. If yes, how long have you been coached for?

_____ **YEARS** _____ **MONTHS**

20. What is the highest level of competition you have **ever** competed at in your primary sport?

Local (*Competing against athletes from your city/town*)	◯
Provincial (*Competing against athletes from around the province*)	◯
Regional (*Competing against athletes from the Western provinces*)	◯
National (*Competing at National Championships*)	◯
Elite for Age (*Competing at an international level against athletes of the same age group*)	◯
International (*Competing for your country of Citizenship at an international level*)	◯
Other (please specify) _____	◯

21. In your primary sport what is the highest level are you **currently** (in the past 2 years) competing at?

Local (*Competing against athletes from your city/town*)	◯
Provincial (*Competing against athletes from around the province*)	◯

Regional (*Competing against athletes from the Western provinces*)	◯
National (*Competing at National Championships*)	◯
Elite for Age (*Competing at an international level against athletes of the same age group*)	◯
International (*Competing for your country of Citizenship at an international level*)	◯
Other (please specify) _____	◯

22. How many years have you competed in your primary sport at your current level?

≤ 1 year	◯
1 to 2 years	◯
2 to 5 years	◯
5 to 10 years	◯
More than 10 years	◯

23. For your primary sport what seasons per year do you competitively compete (select all that apply)?

Spring	◯
Summer	◯
Fall	◯
Winter	◯

24. For your primary sport do you have an off season when you are not training or competing?

YES ◯ **NO** ◯

25. If yes: How many weeks/months is your off season? _____ **WEEKS** or _____ **MONTHS**

26. For your primary sport how many days per week do you train?

_____ **Number of Days**

27. For your primary sport how many sessions per **day** do you train?

_____ **Number of Sessions per day**

28. For your primary sport approximately how many hours per week do you train?

_____ Hours per Week

29. For your primary sport and primary position/event/discipline, what is your personal best/ personal records (PB/PR)?

    PB/PR: _____ N/A ◯

30. For your primary sport and primary position/event/discipline, what is your competitive season record/best (SR/SB)?

    SR/SB: _____ N/A ◯

Appendix A2: The Self-Compassion Scale (SCS)

Please read each statement carefully before answering. Indicate how often you behave in the stated manner, using the following scale:

Almost Never				Almost Always
1	2	3	4	5

1. I'm disapproving and judgmental about my own flaws and inadequacies.

Almost Never				Almost Always
1	2	3	4	5

2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

Almost Never				Almost Always
1	2	3	4	5

3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

Almost Never				Almost Always
1	2	3	4	5

4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

Almost Never				Almost Always
1	2	3	4	5

5. I try to be loving towards myself when I'm feeling emotional pain.

Almost Never				Almost Always
1	2	3	4	5

6. When I fail at something important to me I become consumed by feelings of inadequacy.

Almost Never				Almost Always
1	2	3	4	5

7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

Almost Never				Almost Always
1	2	3	4	5

8. When times are really difficult, I tent to be tough on myself.

Almost Never				Almost Always
1	2	3	4	5

9. When something upsets me I try to keep my emotions in balance.

Almost Never				Almost Always
1	2	3	4	5

10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

Almost Never				Almost Always
1	2	3	4	5

11. I'm intolerant and impatient toward those aspects of my personality I don't like.

Almost Never				Almost Always
1	2	3	4	5

12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

Almost Never				Almost Always
1	2	3	4	5

13. When I'm feeling down, I tend to feel like most people are probably happier than I am.

Almost Never				Almost Always
1	2	3	4	5

14. When something painful happens I try to take a balanced view of the situation.

Almost Never				Almost Always
1	2	3	4	5

15. I try to see my failings as part of the human condition.

Almost Never				Almost Always
1	2	3	4	5

16. When I see aspects of myself that I don't like, I get down on myself.

Almost Never				Almost Always
1	2	3	4	5

17. When I fail at something important to me I try to keep things in perspective.

Almost Never				Almost Always
1	2	3	4	5

18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.

Almost Never				Almost Always
1	2	3	4	5

19. I'm kind to myself when I'm experiencing suffering.

Almost Never				Almost Always
1	2	3	4	5

20. When something upsets me I get carried away with my feelings.

Almost Never				Almost Always
1	2	3	4	5

21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.

Almost Never				Almost Always
1	2	3	4	5

22. When I'm feeling down I try to approach my feelings with curiosity and openness.

Almost Never				Almost Always
1	2	3	4	5

23. I'm tolerant of my own flaws and inadequacies.

Almost Never				Almost Always
1	2	3	4	5

24. When something painful happens I tend to blow the incident out of proportion.

Almost Never				Almost Always
1	2	3	4	5

25. When I fail at something that's important to me, I tend to feel alone in my failure.

Almost Never				Almost Always
1	2	3	4	5

26. I try to be understanding and patient towards those aspects of my personality I don't like.

Almost Never				Almost Always
1	2	3	4	5

Appendix A3: Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle [select] ***SA****. If you agree with the statements, circle [select]* ***A****. if you disagree, circle [select]* ***D****. if you strongly disagree, circle [select]* ***SD****.*

1. On the whole, I am satisfied with myself.

SA	A	D	SD

2. At times, I think I am no good at all.

SA	A	D	SD

3. I feel that I have a number of good qualities.

SA	A	D	SD

4. I am able to do things as well as most other people.

SA	A	D	SD

5. I feel I do not have much to be proud of.

SA	A	D	SD

6. I certainly feel useless at times.

SA	A	D	SD

7. I feel that I'm a person of worth, at least on an equal plane with others.

SA	A	D	SD

8. I wish I could have more respect for myself.

SA	A	D	SD

9. All in all, I am inclined to feel that I am a failure.

SA	A	D	SD

10. I take positive attitude toward myself.

SA	A	D	SD

Appendix A4: The Body Appreciation Scale (BAS)

Please read each item and indicate your response using the following scale:

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

1. I respect my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

2. I feel good about my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

3. On the whole, I am satisfied with my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

4. Despite its flaws, I accept my body for what it is.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

5. I feel that my body has at least some good qualities.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

6. I take a positive attitude toward my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

7. I am attentive to my body's needs.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

8. My self-worth is independent of my body shape or weight.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

9. I do not focus a lot of energy being concerned with my body shape or weight.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

10. My feelings towards my body are positive, for the most part.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

11. I engage in healthy behaviours to take care of my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

12. I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

13. Despite its imperfections, I still like my body.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

Appendix A5: The Intuitive Eating Scale-2 (IES-2)

For each item, please check the answer that best characterizes your attitudes or behaviours.

1. I try to avoid certain foods high in fat, carbohydrates, or calories.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

2. I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

3. If I'm craving a certain food, I allow myself to have it.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

4. I get mad at myself for eating something unhealthy.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

5. I find myself eating when I am lonely, even when I'm not physically hungry.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

6. I trust my body to tell me when to eat.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

7. I trust my body to tell me what to eat.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

8. I trust my body to tell me how much to eat.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

9. I have forbidden foods that I don't allow myself to eat.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

10. I use food to help me soothe my negative emotions.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

11. I find myself eating when I am stressed out, even when I'm not physically hungry.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

12. I am able to cope with my negative emotions (e.g., anxiety, sadness) without turning to food for comfort.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

13. When I am bored, I do NOT eat just for something to do.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

14. When I am lonely, I do NOT turn to food for comfort.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

15. I find other ways to cope with stress and anxiety than by eating.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

16. I allow myself to eat food I desire at the moment.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

17. I do NOT follow eating rules or dieting plans that dictate what, when, and/or how much to eat.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

18. Most of the time, I desire to eat nutritious foods.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

19. I mostly eat foods that make my body perform efficiently (well).

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

20. I mostly eat foods that give my body energy and stamina.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

21. I rely on my hunger signals to tell me when to eat.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

22. I rely on my fullness (satiety) signals to tell me when to stop eating.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

23. I trust my body to tell me when to stop eating.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Appendix A6: Eating Questionnaire

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all the questions. Thank you.

Questions 1 to 12: Please circle [select] the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

	On how many of the past 28 days …	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
1	Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3	Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4	Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (weather or not you have succeeded)?	0	1	2	3	4	5	6
5	Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6	Have you had a definite desire to have a totally flat stomach?	0	1	2	3	4	5	6
7	Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
8	Has thinking about shape or weight made it very difficult to concentrate	0	1	2	3	4	5	6

	on things you are interested in (for example, working, following a conversation, or reading)?							
9	Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
10	Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11	Have you felt fat?	0	1	2	3	4	5	6
12	Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

	Over the past four weeks (28 days) …	
13	Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?	
14	..... On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)?	
15	Over the past 28 days, on how many **DAYS** have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?	
16	Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?	
17	Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?	
18	Over the past 28 days, how many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	

Questions 19-21: Please circle [select] the appropriate number. Please note that for these questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19	Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? ..... Do not count episodes of binge eating	No Days 0	1-5 days 1	6-12 days 2	13-15 days 3	16-22 days 4	23-27 days 5	Every Day 6
20	On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? ..... Do not count episodes of binge eating	None of the times 0	A few of the times 1	Less than half 2	Half of the times 3	More than half 4	Most of the time 5	Every time 6
21	Over the past 28 days, how concerned have you been about other people seeing you eat? ..... Do not count episodes of binge eating	Not at all 0	Slightly 1 2		Moderately 3	Markedly 4 5 6		

Question 22-28: Please circle [select] the appropriate number on the right. Remember the questions only refer to the past four weeks (28 days).

	Over the past 28 days …	Not at all	Slightly			Moderately		Markedly
22	Has your <u>weight</u> influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
23	Has your <u>shape</u> influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
24	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25	How dissatisfied have you been with your <u>weight</u>?	0	1	2	3	4	5	6
26	How dissatisfied have you been with your <u>shape</u>?	0	1	2	3	4	5	6
27	How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28	How uncomfortable have you felt about <u>others</u> seeing your shape or figure (for example, in communal changing rooms,	0	1	2	3	4	5	6

	when swimming, or wearing tight clothes)?							

THANK YOU

Appendix A7: Compulsive Exercise Test – Athlete Version

Instructions

Listed below are a series of statements regarding exercise. Please read each statement carefully and circle [select] the number that best indicates how true each statement is of you. Please answer all the questions as honestly as you can.

1. I feel happier and/or more positive after I exercise.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

2. I exercise to improve my appearance.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

3. I feel less anxious after I exercise.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

4. If I feel I have eaten too much, I will do more exercise.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

5. If I cannot exercise I feel low or depressed.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

6. I feel extremely guilty when I miss an exercise session.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

7. I feel less stressed and/or tense after I exercise.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

8. I exercise to burn calories and to lose weight.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

9. If I cannot exercise I feel agitated and/or irritable.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

10. Exercise improves my mood.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

11. If I cannot exercise, I worry that I will gain weight.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

12. If I cannot exercise I feel angry and/or frustrated.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

13. I feel like I've let myself down if I miss an exercise session.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

14. If I cannot exercise I feel anxious.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

15. I feel less depressed or low after I exercise.

Never True	Rarely True	Sometimes True	Often True	Usually True	Always True
0	1	2	3	4	5

Appendix A8: Sport Specific State Self-Criticism

Think about the ***most significant negative event in sport*** over the ***past week*** that was personally demanding (such as a setback or failure). Please answer the following on a scale from 1 to 10:

1. How **often** did you have **self-critical** thoughts about a recent negative sport event?	Had none	1	2	3	4	5	6	7	8	9	10	A lot of the time
2. How **powerful** were your **self-critical** thoughts about a recent negative sport event?	Not at all	1	2	3	4	5	6	7	8	9	10	Very powerful
3. How **intrusive** were your **self-critical** thoughts about a recent negative sport event?	Not at all	1	2	3	4	5	6	7	8	9	10	Very intrusive
4. How **long** did your **self-critical** thoughts about a recent negative sport event last?	Fleetingly	1	2	3	4	5	6	7	8	9	10	Most of the day
5. How **distressed** were you by your **self-critical** thoughts about a recent negative sport event?	Not at all	1	2	3	4	5	6	7	8	9	10	Very distressed
6. How **angry/hostile** were your **self-critical** thoughts about a recent negative sport event?	Not at all	1	2	3	4	5	6	7	8	9	10	Very harassing
7. How easy was it to **distract** yourself from your **self-critical** thoughts about a recent negative sport event?	Not at all easy	1	2	3	4	5	6	7	8	9	10	Very easy

Appendix A9: Self-Identification Task

Instructions: *Use the following definitions to answer the question below*.

Self-Compassion – having a kind, connected, and balanced attitude towards yourself
Body Appreciation – positive body image that values your body and rejects unrealistic ideals
Intuitive Eating – balanced eating attitudes and behaviour based on physical needs

Would you describe yourself as high in all three of the above (self-compassion, body appreciation, and intuitive eating)?

YES ○ NO ○

If yes:

Would you be interested in participating in a one on one interview? If you would like to be contacted to participate in an interview please provide an e-mail address that you can be contacted at.

_____

Appendix B: Ethics Approval

UNIVERSITY OF SASKATCHEWAN

Behavioural Research Ethics

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	BEH#
Kent C. Kowalski	Kinesiology	14-29

INSTITUTION(S) WHERE RESEARCH WILL BE CONDUCTED
University of Saskatchewan

STUDENT RESEARCHER(S)
Margo Killham

FUNDER(S)
INTERNALLY FUNDED

TITLE
The Role of Self-Compassion in Women Athletes' Body Appreciation, and Intuitive Eating: A Mixed Methods Approach

ORIGINAL REVIEW DATE	APPROVAL ON	APPROVAL OF:	EXPIRY DATE
04-Feb-2014	10-Feb-2014	Application for Behavioural Research Ethics Review Recruitment Communications Recruitment Communications: Initial Participant Contact Verbal Addressing of Undergraduate Courses E-mail contact with Athletic Department PAWS Bulletin Posting E-mail Contact Informed Consent PHASE ONE Informed Consent PHASE TWO Transcript Release Form Measurements Demographic Survey The Self-Compassion Scale (SCS) Rosenberg Self-Esteem Scale The Intuitive Eating Scale-2 (IES-2) Eating Questionnaire Compulsive Exercise Test – Athlete Version Sport Specific State Self-Criticism Self-Identification Task Interview Guide	09-Feb-2015

Full Board Meeting ☐

Delegated Review ☒

CERTIFICATION

Please send all correspondence to:

Research Ethics Office
University of Saskatchewan
Box 5000 RPO University, 1602-110 Gymnasium Place
Saskatoon SK S7N 4J8
Telephone: (306) 966-2975 Fax: (306) 966-2069

Appendix C: Phase One Recruitment Communications and Consent

Appendix C1: Phase One: Verbal Addressing of Undergraduate Courses

First of all, thank you for letting me speak with you today. My name is Margo Killham and I am a M.Sc. student here at the U of S in the College of Kinesiology. Today I want to talk briefly with you about the opportunity to participate in a research study.

My research is focused on women athletes, more specifically athletes' well-being. Today, I would like to invite all those who are eligible to participate. To be eligible you need to be a woman athlete between 18 and 27 years, who is not currently pregnant or lactating, who is participating in sport at the local level or higher, you need to have 2 years experience in your sport and have competed within the past 12 months.

If you meet these criteria and choose to participate you will be asked to complete an on-line survey. The survey package will take you about 30-45 minutes to finish.

If you are interested in participating please e-mail me at mek642@mail.usask.ca and I will e-mail you a secure link to the survey. It really is that simple.

Thank you so much for your time, please contact me with any questions that you may have regarding participation.

Enjoy your class.

Appendix C2: Phase One: Recruitment Poster

Department of Kinesiology
University of Saskatchewan

PARTICIPANTS NEEDED FOR RESEARCH IN THE AREA OF:

PHYSICAL ACTIVITY AND WELL-BEING

We are looking for ***women athletes***

As a participant in this study, you will be asked to:
Complete an on-line questionnaire.

Your participation will take approximately 30-45 minutes.

For more information about this study, or to volunteer for this study, please contact:
Margo Killham
College of Kinesiology
at
e-mail: mek642@mail.usask.ca

This study has been reviewed by, and received approval through, the Research Ethics Office, University of Saskatchewan.

UNIVERSITY OF SASKATCHEWAN

Appendix C3: Phase One: PAWS Bulletin Posting

Title:
Seeking Women Athletes to Participate Research Study

Body of the Bulletin:
Are you a women athlete currently participating in sport?

We are looking for **women athletes** between 18 and 27 years of age, who are not currently pregnant or lactating to partake in this research study.

Your involvement in this study will include completing an on-line survey that will take approximately 30-45 minutes.

If you are interested in participating in this study please follow this link to complete the questionnaire (web link to the survey will be here).

Thank you!

For more information, contact:
Margo Killham
M.Sc., College of Kinesiology
University of Saskatchewan
Margo.killham@usask.ca

Appendix C4: Phase One: E-mail contact with Athletic Department

Hello _____,

My name is Margo Killham, and I am currently recruiting for my M.Sc. thesis research project under the supervision of Dr. Kent Kowalski. I am a student in the College of Kinesiology working in the area of sport psychology. My current research is related to women athletes' well-being, specifically at the role of self-compassion in women athletes body appreciation and intuitive eating. Participants who are interested in participating will complete a survey that will take approximately 30-45 minutes

I am contacting you to request that you pass the following information to all coaches of women's teams here at the University of Saskatchewan.

Thank you very much for your time. Please feel free to contact me for further information or with any questions you may have.

Margo Killham

> Hello coaches,
>
> My name is Margo Killham, and I am currently recruiting for my M.Sc. thesis research project under the supervision of Dr. Kent Kowalski. I am a student in the College of Kinesiology working in the area of sport psychology. My current research is related to women athletes' well-being, specifically at the role of self-compassion in women athletes body appreciation and intuitive eating. Participants who are interested in participating will complete a survey that will take approximately 30-45 minutes.
>
> Because of University policy I am contacting you through the Huskies Athletic Department.
>
> General criteria for participation are as follows:
> - Athletes must be between 18 and 27 years of age
> - Not currently pregnant or lactating
> - Have a minimum of 2 years of sport specific experience
> - Have competed in the specific sport in the past 12 months
>
> If you think any of your athletes may be interested in participating please have them contact me for more information at mek642@mail.usask.ca. Or if you would prefer to have me come speak to your team, please contact me with a few times that would work for you. I would need about 10 minutes of your practice time.
>
> Thank you very much for your time and consideration.
>
> Margo Killham

Appendix C5: Phase One Informed Consent

Dear Participant:

This information consent letter, a copy of which has been given to you, outlines the details of this research project and what your participation entails. This project is part of the requirements for a Master of Science Degree, in the College of Kinesiology at the University of Saskatchewan, under the supervision of Dr. Kent Kowalski.

This research project is on the role that self-compassion plays in women athletes' body appreciation and intuitive eating.

Participation in this project is completely voluntary and there are no known or anticipated risks to you, the participant in this research study. You will be asked to complete an on-line questionnaire that will ask questions related to your athletic involvement, your self-attitudes, body image, and your eating behaviours and attitudes. The questionnaire will take about 30-45 minutes to finish.

Any information you provide is kept completely confidential. Your name will not appear in any written report from this study and your personal information will be de-identified prior to storage. In accordance with the University of Saskatchewan policy the data collected for this project will be retained for five years by the researcher in a password secured electronic file. Only the researcher and research supervisor at the University of Saskatchewan will have access to the data. In no way does your participation waive your legal rights in the event of research-related harm, nor does your participation release the researcher, sponsor, or involved institutions from their legal and professional responsibilities.

If you have any questions about this project, or would like to discuss the study before reaching a decision to participate, please feel free to contact Margo Killham by email at mek642@mail.usask.ca. You can also contact the research supervisor, Dr. Kowalski at kent.kowalski@usask.ca.

This research project was reviewed and approved on ethical grounds through a harmonized review process by the University of Saskatchewan Behavioural and Regina Qu'Appelle Health Region Research Ethics Boards. Any questions regarding your rights as a participant may be addressed to that committee through the U of S Research Ethics Office ethics.office@usask.ca or (306) 966-2975. Out of town participants may call toll-free at 1-888-966-2975.

Your acceptance below indicates that you have read and understand the description provided; I have had an opportunity to ask questions and my/our questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

☐I consent ☐I DO NOT consent

Appendix D: Qualitative Phase Two

Appendix D1: Phase Two: Interview Schedule

Interview Guide:
Phase Two (Qualitative)

Introductions:

⊙The goal here is to begin our formal communications in the interview setting.

- Introduce myself and talk about my program of study.
- Thank them for taking the time to come.

Consent:
⊙The goal here is to make sure that the participant consents to participate and to prepare them for the interview (pseudonym and audio recording).

- Did you bring your consent form with you?
  - YES ➔ Proceed with verbal confirmation of consent components.
  - NO ➔ Have them read and sign the consent form and then gain verbal consent.
  - Take the completed copy of the consent form for the research records.
- Have the participant choose a pseudonym to be used through the rest of the interview.
- Brief the participant about audio recording
  - Begin the tape recorder.

Rapport Building:
⊙The goal here is to begin focusing our discussion on the athletic experience and to build a comfortable environment of mutual understanding.

- In the first part of this research that you completed in the fall you said that you currently are participating in (SPORT).
- Is this your off season or competition season now?
- What is your favorite part of this sport?
- What position(s) do you play?
  - Can you tell me a about what roles you fill during competition?
- Guide me through an experience that stands out to you as a nice memory
  - This experience may have been in training or competition.

Describe constructs and provide "cheat Sheets":
⊙The goal here is to bring consistencies to our conversation.

Self-Compassion:

- When I talk about compassion, what do you think of?
  - How does compassion feel
  - What are the important parts of compassion?
- Give the participant "cheat sheet"
- Blurb about self-compassion:

- "You have talked about some interesting parts of compassion that we can have toward ourselves. As you can see on the paper that I just gave you researchers define self-compassion as a balanced awareness the inspires us to be understanding toward ourselves in times of suffering and that by recognizing our hardships we can treat ourselves kindly and try to ease our personal pain. Self-compassion has three parts that are also described on your page, self-kindness "being kind and understanding toward oneself in instances of pain or failure rather than being harshly self-critical", common humanity is based on seeing ones experiences as connecting rather than separating or isolating, and mindfulness "holding painful thoughts and feelings in balanced awareness rather than over-identifying with them"."

- When you see how researchers define self-compassion do you think you would add anything or keep it the same?
  - Why would you keep or change these aspects?
- Can you think of a time when you were compassionate to yourself as an athlete?
  - Probe for contextual details
    - Where were you
    - When was this
    - Were other people there
      - Friends, family, spectators, scouts?
    - Was this an important practice/game/competition?

Body Appreciation:

- When I say "body appreciation", what do you think of?
  - Probe and clarify.
    - How does body appreciation feel?
    - How do you know someone appreciates her body?
    - What are some important parts of appreciating your body?
- Give the participant "cheat sheet"
- Blurb about body appreciation
  - "Thank you for sharing your thoughts about appreciating your body with me. You have again talked to some key points. Research explains that body appreciation is a representation of the positive parts of body image. Further body appreciation is built one four building blocks: "(a) hold favorable opinions of their bodies, (b) accept their bodies in spite of their weight, body shape, and imperfections, (c) respect their bodies by attending to their body's needs and engaging in healthy behaviors, and (d) protect their body image by rejecting unrealistic images of the thin-ideal prototype."
- Take a moment to go over the different parts of body appreciation.
- When you see how researchers describe body appreciation do you think you would add anything to the definition?
  - Why would you keep or change these aspects?
- Based on the sheet in front of you can you think of a time when you appreciated your body as an athlete?

- Probe for contextual details
  - Where were you
  - When was this
  - Were other people there
    - Friends, family, spectators, scouts?
  - Was this an important practice/game/competition?

Intuitive Eating:

- Take a moment to go over the different parts of intuitive eating.
- When I talk about intuitive eating, what do you think of?
  - Probe and clarify.
    - Are there feelings that go with eating intuitively?
    - How do you know someone eats intuitively?
    - What are some important parts of intuitive eating?
- Give the participant "cheat sheet"
- Blurb about intuitive eating
  - "Intuitive eating is understood as an adaptive attitude towards eating that results in healthy intake behaviours. Again there are four parts to intuitive eating: (a) eating for physical reasons rather than emotional reasons, (b) unconditional permission to eat rather than having forbidden foods or extended periods of hunger, (c) reliance of hunger and satiation cues – eating when hungry and stopping when full, and (d) body-food choice congruence – eating what the body needs"
- When you see how researchers define intuitive eating do you think you would add anything or keep the definition the same?
  - Why would you keep or change these aspects?
- Based on the sheet in front of you can you think of a time when you have engaged in intuitive eating?
  - Probe for contextual details
    - Where were you
    - When was this
    - Were other people there
      - Friends, family, spectators, scouts?
    - Was this an important practice/game/competition?

Drawing Activity:

⊙The goal here is to provide the participant to bring it all together regarding why they feel the constructs are related.

<u>Part One: Self-compassion and body appreciation</u>

- Introduce the activity (drawing)

- "We are going to work through an activity now. What I would like you to do is draw connections between the different components. While you are working through this please thing of things that are related and things that you think wouldn't be related. Work through this activity as best as you can and then we are going to talk about what you draw."

- Give the participant the first paper and the markers and have them draw the connections.
  - 5-10 mins aprox.

- Can you tell me how are self-compassion and body appreciation related?
  - Why do you see these relationships?
    - Do you feel like this is a general connection or is there something specific?
    - Are some of the connections stronger than others?
    - Do you think that all of these connections are always present?
  - Can you think of a time when you have experienced the relationship between self-compassion and body appreciation as a (SPORT) player?
    - YES ➔ have them talk about their personal experience.
    - NO ➔ have them talk about a hypothetical situation.
      - POTENTIAL PROBE QUESTIONS
  - Walk me through what you were thinking about when you experienced being compassionate to yourself about your balanced eating?
  - Were there other people involved?
  - How did it make you feel?
  - Tell me more about the specific practice/competition (who was there, was it an important event, what was the outcome)

<u>Part Two: Self-compassion and intuitive eating</u>

- Introduce the activity (drawing)
  - "We are now going to move on to the second activity. You did very well on the first one; I am looking forward to what you have to say about this second set of connections."
- Give the participant the second paper and have them draw the connections (they already have the markers.
  - 5-10 mins aprox.

- How do you think self-compassion and intuitive eating related?
  - Is there a reason you see these connections?
    - Do you feel like this is a general connection or is there something specific?
    - Are some of the connections stronger than others?
    - Do you think that all of these connections are always present?
  - When you are training/playing (SPORT) have you ever experienced any of these connections between self-compassion and intuitive eating?
    - YES ➔ have them talk about their personal experience
    - NO ➔ have them talk about a hypothetical situation.

- POTENTIAL PROBE QUESTIONS
    - Walk me through what you were thinking about when you experienced being compassionate to yourself about your balanced eating?
    - Were there other people involved?
    - How did it make you feel?
    - Tell me more about the specific practice/competition (who was there, was it an important event, what was the outcome)

Additional Comments:

⊙The goal here is to provide participants with the opportunity to address other things that they deem important or relevant to the current research.

- Before we wrap up I want to ask you:
    - Additional comments?
    - Is there something else that you think would be important to add to this research?
    - Do you have any further questions or comments?

Conclusion:

⊙The goal here is to wrap up the interview.

- I want to take the time to thank you for your participation in this interview today. With out your time and willingness to chat with me this research would not be possible, so thank you very much for your time and great stories.
- If you have any questions or concerns please feel free to contact me. All the information that you will need is in this package.
    - □ Give the participant their exit package.□

□ Stop the tape recording

Drawing Task #1:

Please use the markers and your concept handouts provided to draw connections between the aspect of self-compassion and body appreciation.

SELF-COMPASSION	**INTUITIVE EATING**
Self- Kindness	Eating for physical reasons rather than emotional reasons.
Common Humanity	Unconditional permission to eat.
Mindfulness	Reliance on hunger and satiety cues.
	Body-food choice congruence.

Drawing Task #2:

Please use the markers and your concept handouts provided to draw connections between the aspect of self-compassion and intuitive eating.

BODY APPRECIATION	**SELF-COMPASSION**
Hold favorable opinions of the body.	Self-Kindness
Accept the body regardless of weight, shape, and imperfections.	Common Humanity
Respect the body by attending to the body's needs and engaging in healthy behaviours.	Mindfulness
Protect body image by rejecting unrealistic images of the thin-ideal portrayed in the media.	

Appendix D2: Phase Two: E-mail Contact

Hello _____,

Recently you completed a research package for my M.Sc. thesis on women athletes' self-compassion, body appreciation, and intuitive eating. At the end of the survey you expressed interest in further participation in this research. I want to thank-you for your further interest in this research area.

I am contacting you because based on your interest and your responses to questions in phase one, you meet the criteria to partake in the second phase of this research project.

This phase of research will consist of a one-on-one interview. The interview will last between 45 and 60 minutes. During the interview we will discuss your experiences of self-compassion, body appreciation, and intuitive eating in more detail.

If you are interested in participating or have any questions regarding participation please e-mail me at mek642@mail.usask.ca.

Thank you for your time.

Margo Killham

Appendix D3: Phase Two Informed Consent

Dear Participant:

This information consent letter, a copy of which has been given to you, outlines the details of this research project and what your participation entails. This project is part of the requirements for a Master of Science Degree, in the College of Kinesiology at the University of Saskatchewan, under the supervision of Dr. Kent Kowalski.

This the second phase of a research project on the role that self-compassion plays in women athletes' body appreciation and intuitive eating that you had previously participated in.

Participation in this project is completely voluntary. The potential risk related to participation in this research is that you will be asked to discuss topics related to body image and eating attitudes and behaviour that may be uncomfortable to you. The potential for psychological risk will be low because the interview, and research project in general, has been designed to focus on positive experiences related to self-attitude, body image, and eating. In addition, you have the right to withdraw at any point during this research, skip questions during the interview, and be provided support resources in the event of psychological distress.

The total time commitment will be approximately 45 - 60 minutes in length. You will complete an individual interview that will explore the findings from phase one. This interview will be audio recorded, you may choose to stop the recording at any point during the interview. Specifically, the goal of the qualitative phase of this research is to explore how self-compassion contributes to women athletes' body appreciation and intuitive eating.

You may terminate participation at any time during the study without consequence. Any information you provide is kept completely confidential. Your name will not appear in any written report from this study (a pseudonym will be used, which will be selected by you) and your personal information will be de-identified prior to storage. In accordance with the University of Saskatchewan policy the data collected for this project will be retained for five years by the researcher in a password secured electronic file and in a locked file that will be stored at the University of Saskatchewan. Only the researcher and research supervisor at the University of Saskatchewan will have access to the data. In no way does your participation waive your legal rights in the event of research-related harm nor does your participation release the researcher, sponsor, or involved institutions from their legal and professional responsibilities.

If you have any questions about this project, or would like to discuss the study before reaching a decision to participate, please feel free to contact Margo Killham by email at

mek642@mail.usask.ca. You can also contact the research supervisor, Dr. Kowalski at kent.kowalski@usask.ca.

This research project was reviewed and approved on ethical grounds through a harmonized review process by the University of Saskatchewan Behavioural and Regina Qu'Appelle Health Region Research Ethics Boards. Any questions regarding your rights as a participant may be addressed to that committee through the U of S Research Ethics Office ethics.office@usask.ca or (306) 966-2975. Out of town participants may call toll-free at 1-888-966-2975.

Your signature below indicates that you have read and understand the description provided; I have had an opportunity to ask questions and my/our questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

_____	_____	_____
Name of Participant	*Signature*	*Date*
_____		_____
Researcher's Signature		*Date*

Appendix D4: Exit Package

Appendix D4.1 Transcript Release

THE ROLE OF SELF-COMPASSION IN WOMEN ATHLETES' BODY APPRECIATION AND INTUITIVE EATING: A MIXED METHODS APPROACH

I,_____, have reviewed the complete transcript of my personal interview in this study, and have been provided with the opportunity to add, alter, and delete information from the transcript as appropriate. I acknowledge that the transcript accurately reflects what I said in my personal interview with Margo Killham. I hereby authorize the release of this transcript to Margo Killham to be used in the manner described in the Consent Form. I have received a copy of this Data/Transcript Release Form for my own records.

_____	_____
Name of Participant	Date
_____	_____
Signature of Participant	Signature of researcher

Appendix D4.2 Debriefing

Dear Participant:

Thank you for successfully completing the components of this research study. Your participation is highly valued. The research being conducted in this study, "Women Athletes' Self-Compassion, Body Appreciation, and Intuitive Eating: A Mixed Methods Approach" is focused on the role that self-compassion plays in women athletes' body appreciation and intuitive eating. There is much research that looks at the maladaptive behaviours that are associated with participation in sport. Some of these behaviours are related to the expectation that an athlete holds for herself in terms of self- attitudes, physical appearance, and eating behaviour.
This research will be used to fulfill the requirements of a Master of Science Degree at the University of Saskatchewan. The results from the research will also be prepared for presentation(s) and manuscript(s) for publication in research journal(s).
I sincerely hope that you have enjoyed this research process and I am very thankful for your participation.

Sincerely Yours:

Margo Eileen Killham

Appendix D4.3 Contact information and results request procedure

Dear Participant:

To formally request the results from this research project please e-mail Margo Killham at mek642@mail.usask.ca. The results of this study will be presented in both a written Master of Science thesis and defense. The results of this study will become available in the fall of 2014.

Thank you again for your time and participation, both are greatly valued.

Sincerely Yours:

Margo Eileen Killham

Appendix D4.4 Thank-you letter

Dear Participant:

I would like to thank you for your participation in this research project. This research is interested in the role of self-compassion and women athletes' body appreciation and intuitive eating. The research is designed in order to understand the correlation between self-compassion and body appreciation and between self-compassion and intuitive eating for women athletes (phase one) and to explore how self-compassion contributes to women athletes' experiences of body appreciation and intuitive eating (phase two).

Please remember that any data pertaining to your participation will be kept confidential. The data will be stored for five years in a password protected file and will only be accessible to the researcher Margo Killham and the research supervisor Dr. Kent Kowalski. Once all the data is collected and analyzed for this project, the results will be used as part of the requirements for a Master of Science Degree. If you are interested in receiving more information regarding the results of this project, or if you have any questions or concerns, please contact me by email at mek642@mail.usask.ca. You can also contact my supervisor, Dr. Kent Kowalski at kent.kowalski@usask.ca.

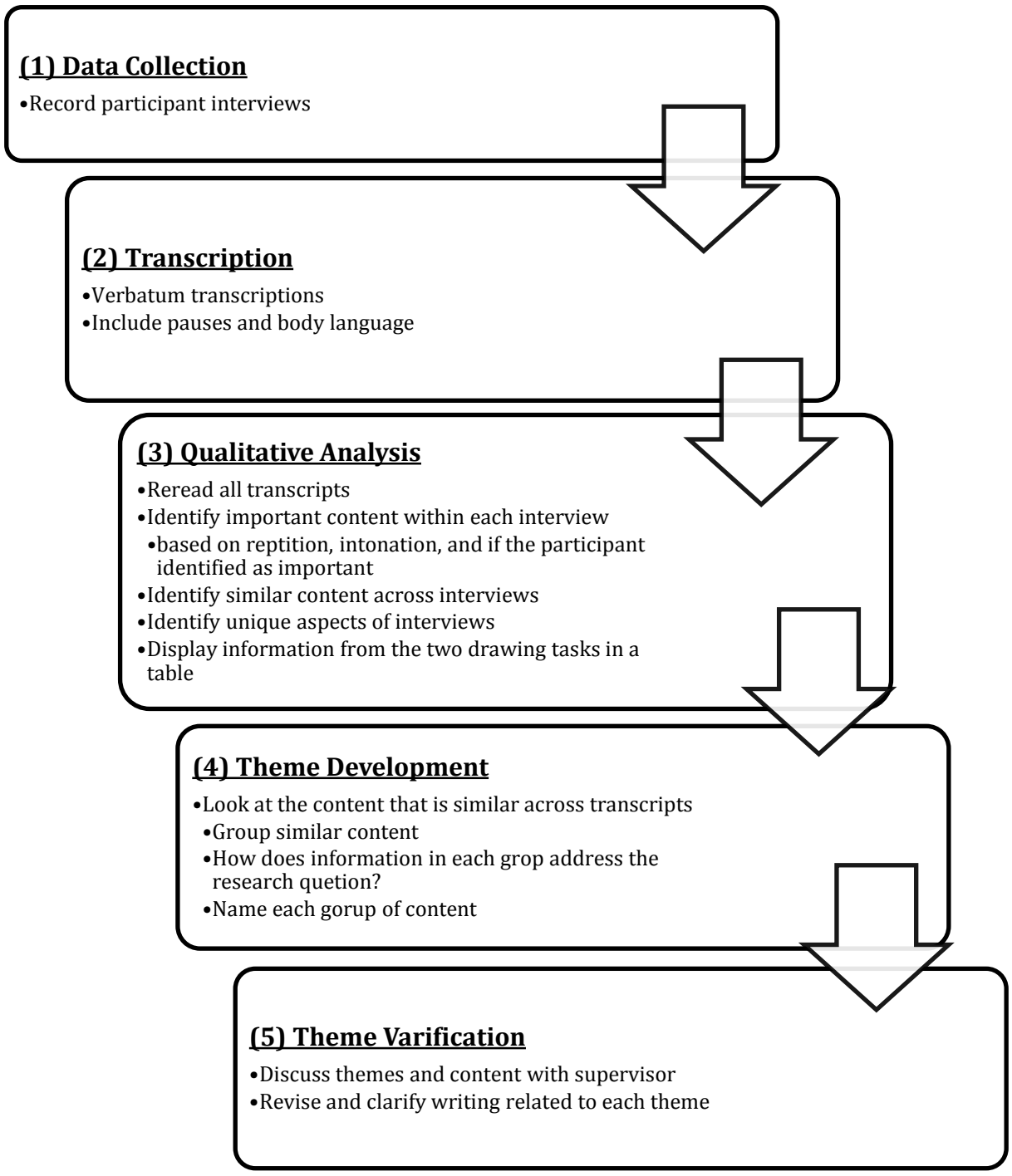
Again, thank you so much for your time and contributions to this research project.

Yours sincerely,

Margo Eileen Killham

Appendix D5: Qualitative Data Analysis Flow Chart

Qualitative Analysis Flow Chart:



Appendix E: Reflexivity

Reflexivity

Part One:

This first section of my reflexivity is aimed to highlight my thoughts and feelings about the relevant concepts and construct during the formulation of my M.Sc. research project. My research is going to be explaining and exploring the role of self-compassion in women athletes' body appreciation and intuitive eating through a mixed methods approach.

Having grown up in sport I feel like I have seen it all when it comes to both negative and positive experiences that women have in sport related to self-attitudes, body image, and eating attitudes and behaviour. I would also say that I have experienced a variety of experiences in my sport contexts. There have been times when I felt as if I couldn't do anything right, embarrassed by my body, and obsessed about food and what I was eating. This being said I feel like the majority of my own experiences as an athlete have been neutral or positive.

For the most part I felt like I contributed to my team in a valuable way as a goal scorer, a good communicator, or as a playmaker; and this made me feel quite good about myself. Looking back on these experiences, even the most recent ones, I think that there was a lot of social comparison at play in establishing my sense of worth: my efficacy beliefs were high but I don't think I was, or have been, very self-compassionate in my athletic career. I think that if I had been more self-compassionate I would have had more positive and maybe even more fantastic experiences in sport, but this is just speculation.

The majority of my negative or challenging experiences in sport, aside from losing or not achieving my goals, were about how I saw, felt, and treated my body. In my younger years I competed in gymnastics and when I started to grow taller and thought I was growing wider I was mortified. My chances of going far in gymnastics were probably quite low to begin with, but when I started to grow I was ashamed and disappointed. My growth dashed my dreams on the rocks and I was very angry with myself. When I look back I think that those feeling are ridiculous, but I also remember how real the feelings were; and I don't want to belittle the internal struggle that raged on when I reached five feet tall. This experience, I think, is the first of many hard times and conversations that I have had about my body. However, I have also had many positive experiences related to how I view my physical body. I have felt good about what my body was capable of, I was happy to have six-pack abs from my early teens until my mid twenties. It is only recently that I have lost this status or physical identifier of physical fitness (I

think I spend too much time reading, studying, and writing …). As an adult who has transitioned into local level soccer somewhat gracefully I find that those age-old feelings of discomfort creeping back into my world. I find myself wishing I was a little bit lighter, thinner, faster, and stronger. These feeling of dissatisfaction colour some of my behaviours (e.g., wearing shorts with my bathing suit or wearing bulky sweaters), which is probably problematic seeing as I am in no way overweight or out of shape; I just don't have the same body as I did a year ago. The thought that I hold onto when I am feeling down about my physical shape, I think, is a great illustration of self-compassion; I realize that my body is capable of so many great things and that it is only going to get older (it's not possible to turn back time … yet), so I should enjoy what I can do, not what I can or should look like.

I think that for the most part my eating has been balanced. I have gone through times when I watched what I was eating and times when I ate everything; but the majority of my eating has been balanced though. I tended and tend to be more concerned with how my body feels after I eat, so I don't eat things that either make me feel like garbage or that didn't help me perform well in training or competition for whatever sport I happened to be playing that day.

As I said above I have seen a lot of things in my time as an athlete in terms of how others behaved or expected me to behave or think. It is experiences like watching teammates use laxatives, feel ashamed when they looked in the mirror, cover their self-consciousness with over-the-top boasting and hubris, and simply hating themselves that has over time made me so very curious about the good experiences that women have in sport. The good experiences, the positive experiences must have existed even if those positive experiences didn't hold my attention long; I am paying attention now.

Part Two:

This second section is my reflection about my own scores on all the measures that I used in my quantitative phase one and thoughts about what it felt like to take the full survey.

There are more components of my research now that I have added a few extra things. I think that although this makes my project bigger, which is a bit worrisome, it also makes my project that much better, which makes me happy.

It took me 27 minutes and 45 seconds to complete the full questionnaire package including the demographic survey. I don't think it was a challenge to compete the survey.

However, there were a few negatively worded questions that I had to read a couple of times to make sure I was answering properly.

SCS: I scored 3.16 mean score on the SCS. This score isn't surprising; I thought that I would score above the midpoint of the scale. I thought that I would score a little higher but when I look back at my responses I see that I scored higher than I expected on several of the negative questions specifically in the self-judgment subscale. I didn't want to change my answers when I went back though because I felt that I answered honestly. I guess I know now that I can work on how I judge myself and work on being kinder to myself specifically when I am struggling or failing. Good to know.

BAS: I scored 3.40 mean score on the BAS. I was a bit surprised with my score on the BAS, as I mentioned in my first part of this reflexivity my body image is something that has not always been very good. I guess it's nice to see it quantified that maybe I am happier with my body than I thought. I wish that the BAS had measurable subscale so that I could see what aspects of my body appreciation are strong and which parts are well less strong.

IES-2: I scored 3.78 mean score on the IES-2. Again on this scale I am not surprised that I scored well (I think). Eating is something that I am usually pretty good with. I don't often overeat or feel the need to eat my feelings, so that's good. My biggest issue is that sometimes I forget to eat for a while when I am stressed or working hard, but this doesn't happen often.

EDE-Q: I scored 1.44 mean score on the EDE-Q. No surprise here, see comments about eating behaviour. I would also add that I have gone on diets and sometimes I consider the amount of calories in some foods, but not obsessively.

CET-AV: I scored 9.61 mean score on the CET-AV. This was a higher score than I expected. When I looked back at my responses I think this higher score is a result of the guilt and frustration I feel if I am unable to exercise. Part of that is because I see my grandparents declining health; I see the decline as a direct result of being inactive for the majority of their lives and I really don't want to end up like that. The second part of my frustration about not being able to exercise is thinking that I would feel better if I did, as well as less stressed and happier. So I guess maybe I do exercise compulsively. I don't see it that way, but maybe I do.

RSES: I scored 2.25 mean score on the RSES. I'm not sure what the norms are for this scale; I will have to look that up because at first glance this score seems very low. I am pretty certain that

I feel relatively good about myself and that I have worth. I looked this up and it turns out this is a normal score. Good, I am glad to be normal.

SC-AV: Finally, I scored 5.11 mean score on the SC-AV. As revealed in my SCS subscale scores, I can be highly critical and judgmental toward myself. I am not surprised with this. As much as I try very hard to see the positives in everything in life, it is sometimes very challenging to not be critical, particularly in sport. I tend to set high goals and higher expectations for myself in all my activities. When I compete I compete against others, but I competed fiercely against myself too; and sometimes I get a bit carried away.

Part Three:

This third section of my reflexivity is a comparison of my own scores to the data collected from phase one on all scales.

Now that I have gone through and analyzed my quantitative data I wanted to look and reflect on where I fall within the sample means. This is more out of personal curiosity than anything, seeing that if I wasn't the one doing the research I probably would have participated. For all the scales I fell around means/medians. For the SCS, the IES-2, and the RSES I was above the mean, which is good, I guess. I was also above the mean on the CET-AV and the SC-AV, which is not as great. Finally I was below the mean on the BAS (which isn't surprising but not great either), and the EDE-Q (which is also not surprising but a good thing).

Part Four:

This fourth section of reflection is simply my reflection of how I would respond to the two drawing tasks I am asking participants in phase two to complete during their interview.

I completed the two drawing tasks before I asked my participants to. It was actually a lot of fun. When I first started working on the tasks I didn't have that many connections, but the more I thought about specific examples or what the subcomponents represented I was able to see more and more connections (see below for all the connections I made between the constructs subcomponents).

Self-kindness: IE (unconditional permission to eat), BA (holding favorable opinions of the body, accepting the body regardless, respecting the body and engaging in healthy behaviours, and protecting body image by rejecting media images).

Mindfulness: IE (Eating for physical reasons, reliance on hunger cues, and body-food choice congruence), BA (respecting the body and engaging in healthy behaviours and protecting body image by rejecting media images).

Common Humanity: IE (Eating for physical reasons- not eating for emotional reasons), BA (Accepting the body regardless and protecting body image by rejecting media ideals).

Part Five:

This fifth and final reflection is intended to express my thoughts about how I approached my data collection and analysis for phase two (qualitative). I think that this section is important because as always with qualitative research the researcher is immersed in the data collection and analysis, and how I approach qualitative analysis could potentially misrepresent the data. So with the desire to represent the data as clearly and accurately as possible, I am outlining my thoughts and feelings about the qualitative process below.

Data analysis is a very exciting stage in research. After I finished transcribing the six interviews I felt like I was very familiar with the content of the collective case. During analysis I struggled a little bit with getting side-tracked by really interesting bits of conversation that didn't necessarily contribute to answering the over all research question. When I realized that I was wandering down these tangents in my analysis I wrote out my research question on a post-it note and put it on my computer so that when I was looking at the salient themes that came out of the interviews I was focusing on themes that helped to describe how women athletes felt self-compassion contributed to their experience of body appreciation and intuitive eating. After I had my post-it up it became much simpler to focus and select quotes that represented the key themes.

Now that my analysis is complete I see that my interview guide really elicited a lot of information that could direct future research, so I need to remember to add some of those quotes and ideas into my future directions section.

Appendix F: Results

Appendix F1: Full Correlations Table

Table 4.4 (FULL) *Phase one Pearson Product Moment correlations for self-compassion, body appreciation, intuitive eating, self-esteem, disordered eating, compulsive exercise, and self-criticism and measure subscales*

	1.	2.	2.a	2.b	2.c	2.d	2.e	2.f	3.	4.	5.	6.	6.a	6.b	6.c	6.d	7.	7.a	7.b	7.c
1.	- - -																			
2.		- - -																		
a		.831**	- - -																	
b		.708**	.632**	- - -																
c		.734**	.599**	.737**	- - -															
d		-.836**	-.659**	-.347**	-.397**	- - -														
e		-.696**	-.514**	-.430**	-.405**	.734**	- - -													
f		-.810**	-.404**	-.262*	-.343**	.599**	.641**	- - -				.								
3.		.680**	.669**	.531**	.542**	-.566**	-.459**	-.365**	- - -											
4.		.533**	.467**	.336**	.377**	-.519**	-.408**	-.318**	.643**	- - -										
5.		.734**	.688**	.517**	.437**	-.640**	-.580**	-.510**	.729**	.443**	- - -									
6.	.255*	-.591**	-.517**	-.261*	-.373**	.672**	.459**	363**	-.708**	-.730**	-.505**	- - -								
a		-.356**	-.253*	-.020	-.201	.518**	.351**	.197	-.397**	-.622**	-.278**	.786**	- - -							
b		-.507**	-.492**	-.211*	-.310**	.542**	.403**	.308**	-.598**	-.666**	-.462**	.875**	.629**	- - -						
c	.264*	-.642**	-.586**	-.350**	-.419**	.684**	.462**	.394**	-.766**	-.675**	-.560**	.938**	.594**	.767**	- - -					
d	.343**	-.561**	-.492**	-.295**	-.365**	.621**	409**	.364**	-.703**	-.646**	-.467**	.947**	.640**	.766**	.912**	- - -				
7.		-.377**	-.284**	-.066	-.120	.487**	.418**	.283**	-.370**	-.425**	-.248*	.538**	.423**	.520**	.506**	.474**	- - -			
a		-.021	-.012	.094	.055	.070	.114	.007	.028	-.005	.046	.078	.063	.164	.051	.026	.704**	- - -		
b		-.361**	-.305**	-.080	-.177	-.486**	.300**	.236*	-.545**	-.581**	-.291**	.697**	.541**	.556**	.686**	.671**	.767**	.235*	- - -	
c		-.436**	-.299**	-.128	-.121	-.511**	.515**	.366**	-.274**	-.331**	-.276**	.409**	.327**	.447**	.371**	.333**	.881**	.564**	.489**	- - -
8.		-.452**	-.379**	-.249*	-.317**	.434**	.340**	.343**	-.435**	-.328**	-.347**	.494**	.352**	460**	.468**	470**	.247*	-.059	.303**	.272**

Note: Self-Compassion Scale (SCS), Body Appreciation Scale (BAS), Intuitive Eating Scale (IES-2), Eating Disorder Examination-Questionnaire (EDE-Q), Compulsive Exercise Test-Athlete Version (CET-AV), Self Criticism-Athlete Version SC-AV).
1=BMI, 2=Self-compassion (SCS), 2.a= self-kindness, 2.b=mindfulness, 2.c=common humanity, 2.d=self-judgment, 2.e=over-identification, 2.f=isolation, 3=Body appreciation (BAS), 4=Intuitive eating (IES-2), 5= Self-esteem (RSES), 6= Disordered eating (EDE-Q), 6.a= restraint, 6.b= eating concerns, 6.c= shape concerns, 6.d= weight concerns, 7= Compulsive exercise (CET-AV), 7.a= mood improvement, 7.b= weight control exercise, 7.c= avoidance of negative affect, 8= Self-criticism (SC-AV)
Degrees of freedom (88)
* $p < 0.05$ (two-tailed).
** $p < 0.01$ (two-tailed).

Appendix F2: Phase Two: Participant Construct Connections

Table 6.3: Participant connections between self-compassion and body appreciation and intuitive eating subcomponents

	Self-Kindness	Mindfulness	Common Humanity
Holding Favorable opinions of the body*	6 of 6	2 of 6	1 of 6
Accepting the body regardless of weight, shape, and imperfections*	5 of 6	5 of 6	3 of 6
Respect the body by attending to the body's needs and engaging in healthy behaviours*	5 of 6	5 of 6	1 of 6
Protect body image by rejecting unrealistic images of the thin ideal*	3 of 6	4 of 6	4 of 6
Eating for physical reasons rather than emotional reasons	2 of 6	6 of 6	0 of 6
Unconditional permission to eat	6 of 6	2 of 6	2 of 6
Reliance on hunger and satiety cues	3 of 6	5 of 6	0 of 6
Body-food choice congruence	2 of 6	4 of 6	2 of 6

Note: All subcomponents marked with * are components of body appreciation, while the components below the table break are components of intuitive eating.